Connecticut INDUSTRY

FEBRUARY, 1956

Does your telephone system meet your business needs?

Businesses have a way of "outgrowing" their telephone facilities. Perhaps it's happened to your business. It's easy for you to tell when you need more space or more people . . . but you may have outgrown your telephone system without knowing it. And that's where we can help.

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THE SOUTHERN
NEW ENGLAND
TELEPHONE
COMPANY

Connecticut INDUSTRY

MANUFACTURERS' ASSOCIATION OF CONNECTICUT, INC.

VOL. 34 - NO. 2 - FEBRUARY, 1956

L. M. BINGHAM, *Editor*

IN THIS ISSUE

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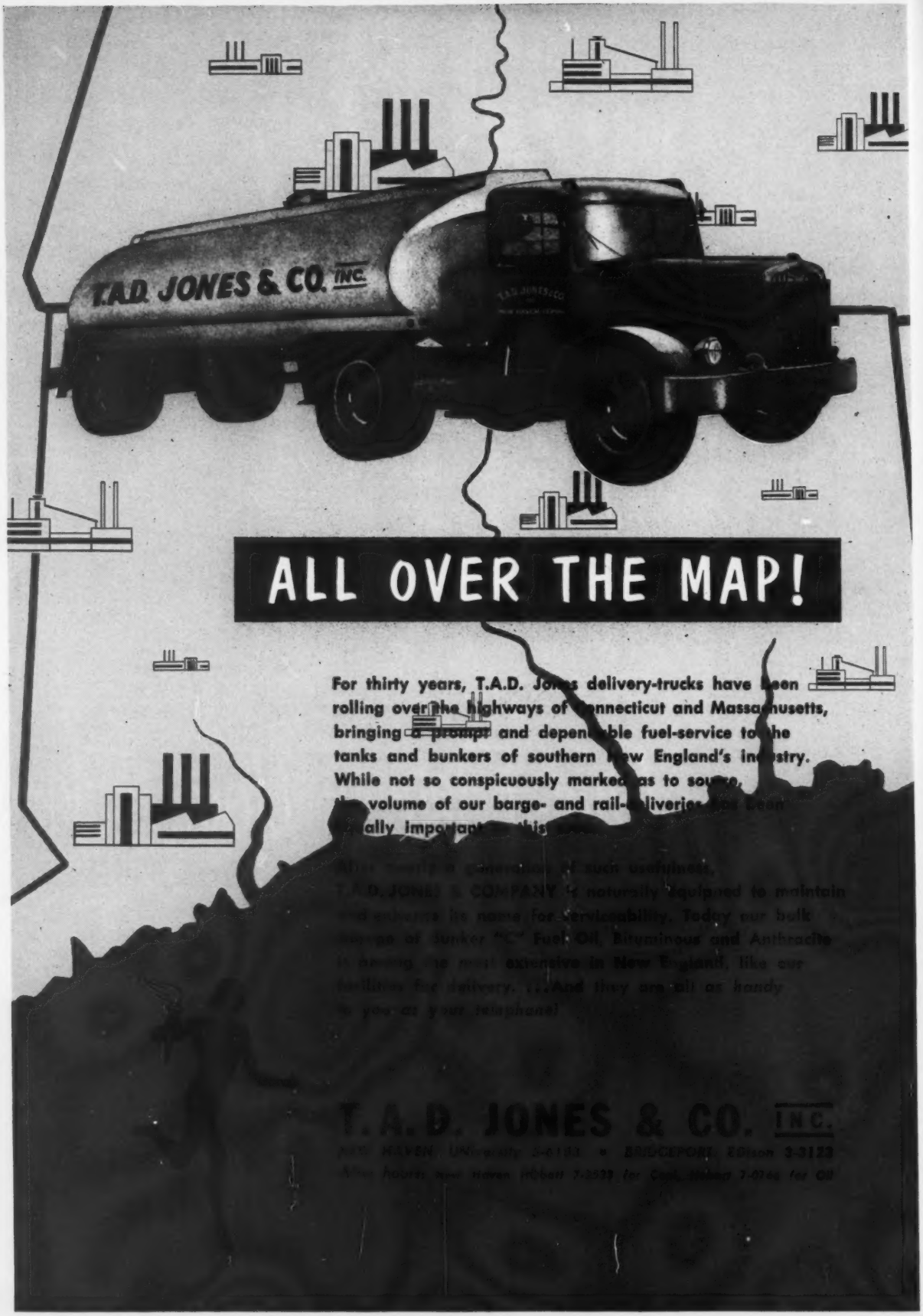

ALL OVER THE MAP!

For thirty years, T.A.D. Jones delivery-trucks have been rolling over the highways of Connecticut and Massachusetts, bringing a prompt and dependable fuel-service to the tanks and bunkers of southern New England's industry. While not so conspicuously marked as to source, the volume of our barge- and rail-deliveries has been equally important to this

After nearly a generation of such usefulness, T.A.D. JONES & COMPANY is naturally equipped to maintain and enhance its name for serviceability. Today our bulk storage of bunker "C" Fuel Oil, Bituminous and Anthracite is among the most extensive in New England, like our facilities for delivery. ¶ And they are all at handy service for you at your telephone!

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Where Do We Find Skilled People?

By HARVEY L. SPAUNBURG*
President, Veeder-Root Incorporated, and
Vice President, Manufacturers Association of Conn., Inc.

WE all know of the difficulty in finding enough skilled people to do the jobs which must be done in our Connecticut factories.

It is especially difficult to find skilled technicians, those people who are between engineers and factory workers. As a matter of fact, the Bureau of Vocational Education of the Connecticut State Department of Education has been conducting a survey in New Haven, Stamford, Norwalk, Meriden and Bridgeport to ascertain the needs for these people and what steps should be taken to overcome any shortages.

It is a well-known fact that on a national scale the shortest supply of skilled labor exists for machine shop workers, machinists, toolmakers, die sinkers, and setters.

What can be done about it?

One method, of course, is to recruit people from out of state. But, as *Iron Age* magazine reports in a recent issue: "There's a limit to out-of-area recruiting, the conventional answer to personnel problems. For example, 40 states have out-of-area recruiting programs for electrical engineers, 42 for mechanical engineers. This amounts to the same end result as the old chain letter and is just about as useful under these conditions."

So, out-of-state recruiting can be futile as well as expensive. Wholesale relocation of employees rarely proves to be satisfactory except in a national emergency such as all-out mobilization for war.

There is another major step which can be taken to help fill the gaps in our skilled labor force. This is the use of federal, state, city, and industry cooperative efforts to train potentially skilled men and women. We have a start in this direction with the present apprenticeship programs with which most of us are familiar. Then there is the current educational effort to fill the gap of skilled technicians. And there are the many off-the-job programs of our Connecticut vocational schools, junior colleges, and engineering schools to meet the specific needs of industry. This is being done with success in large communities like Hartford, New Haven, and Waterbury.

The Connecticut industrial complex is ideally suited to this type of cooperative effort inasmuch as most of our companies are relatively small and it is almost impossible for any one Company to provide financing for its own needs.

I believe we will have to be even more aggressive in working with private and public educators to develop this cooperative training in the immediate future. This will be particularly true as our economy expands and the demand for skilled people grows with it.

A third major area where we can develop skilled people is within our own companies. I believe that our first job is to earn the loyalty and help develop the capacities of the skilled people we now have on the job. Our welders, sheet metal workers, electricians and mechanics are in short supply, and competition for them is keen. If we are to keep these men, we must make sure that our wages and working conditions are in line and that we are providing good incentives and the kind of recognition that encourages a man to feel he is an accepted and respected member of the team.

The other thing we can all do is to set up in-plant training programs so that we can develop skilled employees within our own ranks. I believe the watchword of industry in Connecticut in the years to come must be: "Training and more training." There are rich and undeveloped human resources available in every plant if we can only find and develop them. Columbia University's Human Resources Project has found that half of the nation's manpower with the greatest ability to learn and the greatest intelligence has not gone to college. In other words, less than half of those who score in the upper six per cent of the population in intelligence tests are college graduates.

The non-college group includes many very able persons. Some of them may be doing routine or relatively unskilled work in your factory. Using proven personnel and testing techniques we can discover who these people are and place them where they can grow.

Finding new sources of skilled manpower is not easy. In fact it never was a simple task. We have in Connecticut many splendid public and private colleges, junior colleges and technical schools which now have cooperative programs in operation with industry. We have, also, within our organizations many people with potential skills waiting to be discovered.

These are the most fertile areas for us to cultivate in our search for skilled employees to keep our factories operating at high efficiency in the future.

** The outline of the experience background of Mr. Spaunburg, author of this months guest editorial, appears on the first page of this months News Forum Department.*

THE PLANT of Haydon Mfg. Co., Inc., located on East Elm Street, Torrington.

Growth at *Haydon* Manufacturing Co.

THE development of small synchronous motors was primarily based on the potential market of the electric clock field. They made possible, not many years ago, the electric clock which is so commonly accepted today.

Early Years

The production of a motor for this original purpose opened up a second market, which today is equally as important in volume and in service to the public. This market was in the application of electrical timers and timing apparatus, both replacing and supplementing mechanical or spring-driven devices, for all types of control purposes.

It was to fill this need that the organization, now know as Haydon Manufacturing Company, was established in 1933, in Waterbury, as a three man laboratory. A year of research and model-making resulted in a synchronous timing motor incorporating the latest developments in the art and designed primarily for general industrial use, as distinguished from motors designed primarily for clocks. One of the features was the slow rotor speed of 450 rpm, which is still largely used today.

Since the speed of any synchronous motor is dependent entirely upon the frequency of the power which serves it, its speed is as constant as is the frequency supplied by the power company. Small synchronous motors have proved so successful in accurate timing operations that power companies have made large investments in regulating the frequency of their systems. Such regulation, involving complicated apparatus, is known as Frequency Control.

The years 1933-1937 witnessed gradual recognition of the product, development of markets, the solution of many engineering and production difficulties and a build-up in production that was outgrowing available quarters. The product was still one basic motor, with an increasing variety of reduction gear trains and output speeds to meet various requirements.

Larger quarters were needed in 1938 for current production and for expansion into other products, and so operations were transferred to Forestville. In the three years preceding World War II, there followed fairly rapid expansion of capacity and the product line. The availability of a new product to do certain jobs seemed to increase the existing market and to open up continually new end uses. For example, the constant speed electric chart drive supplemented the mechanical devices previously in use, and the entire market expanded rapidly. There came into existence quite a few concerns specializing in timers of many types, ranging from industrial process control to automatic scoreboard-operating devices. Haydon Manufacturing expanded with requirements, developing many additional output speeds, up to 60 rpm and down to 1 rpm, and special motor types, such as those for heavy duty applications, those providing reversible output shaft action, and those incorporating a magnetic clutch for automatic resetting of the shaft to the starting position upon

MODERN automatic hydraulic presses assemble, size and remove completed assemblies.

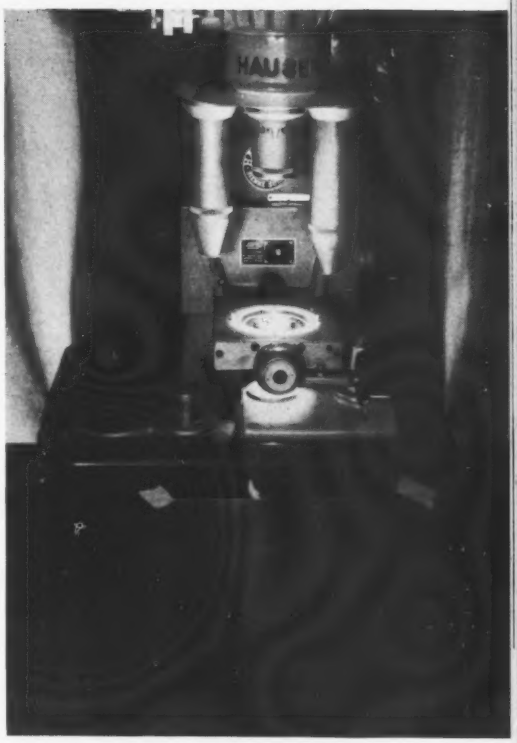
completion of an operation. All were built upon the basis of the fundamental hysteresis type motor and the many refinements introduced from time to time.

During the same period it became apparent that the motor was the heart of the many new electrical timing devices being introduced, and there were many requests for Haydon Manufacturing Company to take on the remainder of the work. This eventually resulted in the first tentative steps into the timing device field, such as a special drive for electric metronomes and a special clock for timing telephone calls.

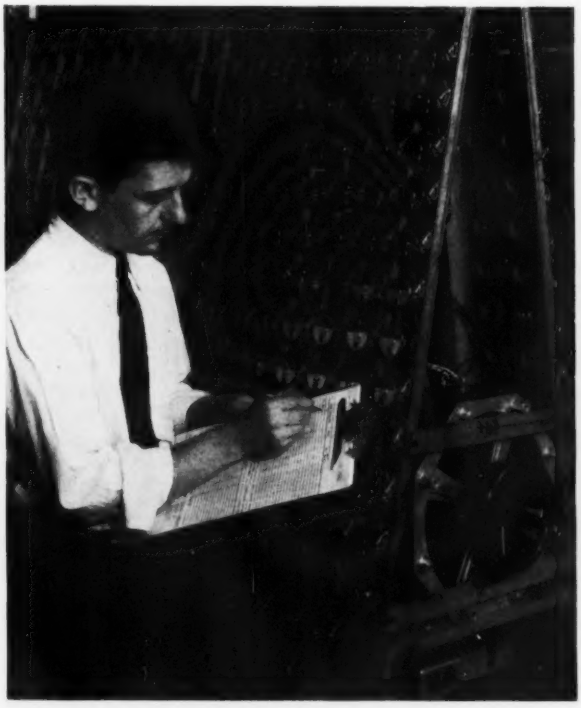
War Contribution

By the time the war started, the Company was a recognized leader in an entirely new industry and the potentials of synchronous motors and motor driven timers were becoming widely recognized in the engineering fraternity. The war brought a realization that the company's product was of military value in many applications. With it came a flood of new requirements for military apparatus and the devotion of almost 100% of production to the armed services. Products already developed were in heavy demand and new products were constantly required. For example, the motor line was extended to include a D.C. unit for aircraft and certain naval uses. The trend into timing devices was intensified with the need for such items as automatic keyers for S.O.S. bouys, aircraft controls, A.C. and D.C. time delay relays for protection of electronic tubes and many others. The company's skills were also utilized in the production of certain rather complex gear assemblies. One interesting major exception to the military character of the business was in the sale of many motors for automatic coal stokers, which had the blessing of the government as helping with the critical oil shortage. Also during the war additional factory space was rented on East Elm Street in Torrington.

In 1945 the company became, through purchase, a subsidiary of the General Time Corporation, and thus became affiliated with many of the other important developments in the horological art. Stromberg Time, another part of the Corporation, had specialized in the development of master clock systems, for accurate control of the many clocks in large buildings, in time recorders and job stamps for personnel and process control work

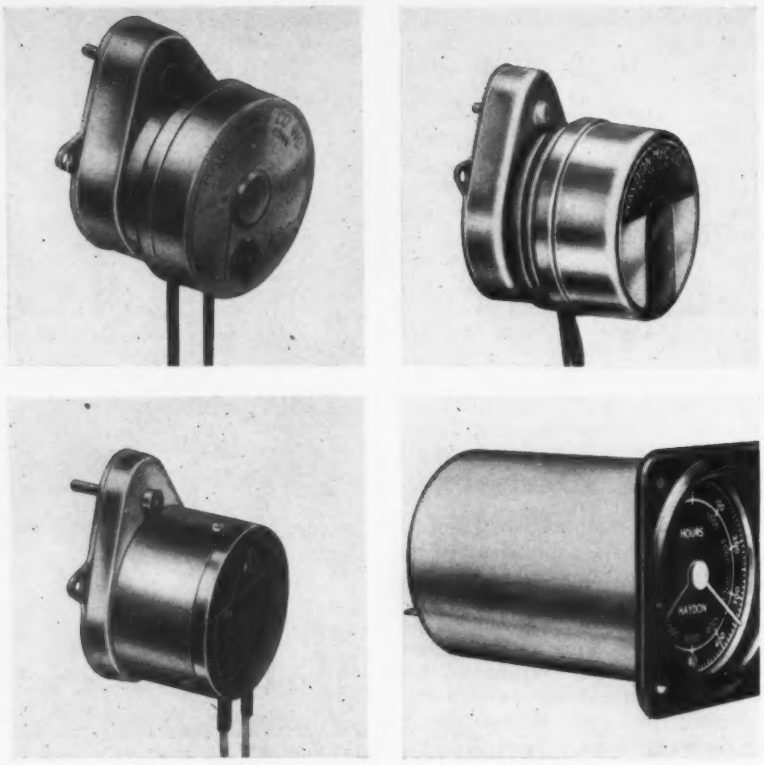


GEAR PROFILE is checked for finish and faithful reproduction of the original profile.



THOUSANDS OF MOTORS DAILY, are inspected for noise, low and high voltage operation and intermittent stopping and starting.

THERE IS NO SUBSTITUTE for the highly skilled fingers of a trained rotor truer, in spite of modern high precision equipment.



SOME PRODUCTS of Haydon Mfg. Co. are shown here. Top left, front view of a slow speed motor, 60 cycle; right, front view of a 400 cycle motor for airborn use; bottom left, Haydon's direct current motor; right, side view of a hermetically sealed elapsed time meter, airborn equipment.

and similar industrial items. Seth Thomas Clocks was carrying on a tradition of fine workmanship in both spring-wound and electric timepieces, and Westclox was not only supplying popularly-priced clocks and watches but was also contributing heavily to the military demand for certain mechanical escapement mechanisms.

Post War Expansion

As with many other companies, the pent-up civilian demand upon the conclusion of hostilities was unprecedented, necessitating further expansion of employment and facilities. A new plant, of approximately 65,000 square feet, was constructed in Torrington. By 1947 all operations had been consolidated there, with the thought that these facilities would serve the relatively small space requirements of motor and timer manufacture for the foreseeable future. Yet by 1953, the continued recognition of the company's products and expansion of demand required the use of the entire new plant for motor manufacture, and the establishment of all devices manufacture in another plant of about 25,000 feet, also in Torrington.

This further expansion in operation in the post-war years was due not only to the continuing expansion of motor usage in old and new applications, but also to the broadening of the company's product line of motor driven timing apparatus. Movements for electric clocks (motor, gear train and arbor for mounting hands) were added and proved quite popular, particularly for advertising and novelty purposes. In timing devices, certain standard units were developed, such as time delay relays for proper sequencing of equipment operation, cycle timers for control of a series of related actions, elapsed time indicators for registering hours of equipment operation and interval timers for manual selection of the operating time of an appliance or other equipment.

HAYDON'S refrigerator defrost control.

In 1950 and 1951 the military demand for motors and timers again became so heavy that it was necessary to maintain production at a high rate to meet both service and civilian requirements. Expanded research and development facilities were largely turned over to projects of military significance. One of these resulted in the introduction of the first synchronous timing motor for operation on the 400 cycle current now being widely used in military aircraft. Shortly afterwards there was announced an unusually small and light elapsed timer meter, also 400 cycle, for use in recording the operating time of certain types of military equipment that require periodic overhaul and replacement. At the same time, the continuing importance of direct current for airborne timing was recognized with the introduction of improved motors of this type.

The return to more normal conditions within the last two years has permitted the resumption of many desirable civilian projects, primarily in basic development work on new types of motors and timers, and in the development of certain items specifically engineered for various home appliances. With such products Haydon has moved further into the timing field, and is now making automatic defrost controls for refrigerators, and time controls for clothes dryers.

The engineering staff and effort for such continual development work has been necessarily large. Sales work also demands a considerable amount of technical ability, as all sales are made directly to equipment manufactures, whose requirements are often complex. For distribution of this type an alert and capable sales staff is essential. Both direct factory salesmen and manufactures' representatives are employed.

The Haydon Manufacturing Company today reaches into almost every phase of electro-mechanical production for civilian and military usage. Motors are made for such diverse ap-

(Continued on page 46)

SEVEN of the eight 50-year employees, left to right, Charles Johnson, Miss Susan Emerson, Miss Nora Kirby, Miss Bridget Malley, John Ross, Robert Isaacson, Josephine Fagan. Miss Priscilla Emerson, the oldest in length of service, was not present for the photograph.

Continental Can Company *Honors Veteran Employees*

THE Continental Can Co. of Kensington (formerly The American Paper Goods Company) held its first Veterans Club Reception and Banquet at the Indian Hill Country Club, November 9, during which watches and service pins were distributed to 78 employees of the plant who had completed 25 years or more service for the present company and its predecessor, The American Paper Goods Company.

Coming as a complete surprise, special recognition was given to the eight employees of the plant who had completed 50 years or more of continuous service with the company and who, together, had served a total of 436 years. Personalized gifts valued at $300 each were presented by Hans A. Eggerss, president of Continental Can, to each of the 50-year veterans, four of whom are still employed and four of whom have retired since January 1, 1955. The gifts included such items as davenports, combination radios and phonographs, television sets and a garden tractor for one retired foreman whose hobby is gardening.

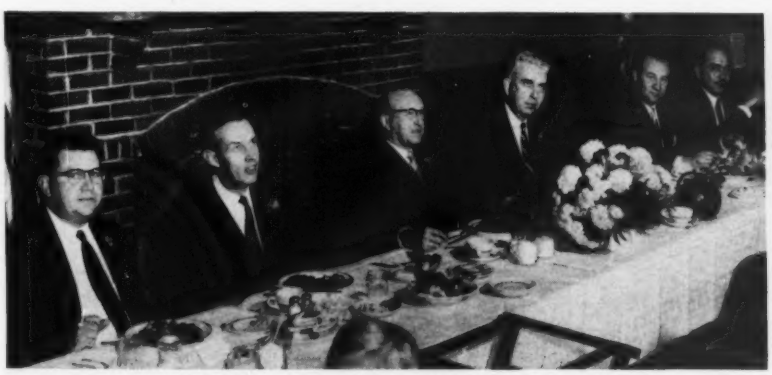
Commenting on the employees' record of loyalty, William F. Doran, plant manager, who presided at the meeting following the banquet, said:

"We have quite a record in this APG plant. Of our approximately 400 employees eight have worked here over 50 years, and one of our most beloved employees topped the record at 61 years when she retired in January.

"This is really a wonderful record of loyalty and dependability and it speaks well for the employees and also for the company they have served.

"The American Paper Goods Co. has been a good place in which to work. It must have been so, or we wouldn't all have stayed so long—and the 78 employees who are being honored here tonight have played a major part in its past success. They have kept the wheels turning through wars and depressions. They have given stability to the company with their knowledge, experience and character, and in this present year have helped enormously to facilitate our merger with the Continental Can Co. They have been a very striking example of the often quoted statement that 'The greatest asset of any business is its loyal employees'."

JOSEPHINE FAGAN, an active employee with 54 years of service, receives a corsage from James Taylor.



SHOWN at the head table, Moss Alex, general manager of sales, paper container division; James Taylor, general manager of manufacturing for the division; Hans A. Eggerss, president of Continental Can; William F. Doran, plant manager at Kensington, Warren Lacke, general manager of industrial relations for the company and Jerry Markham, manager of industrial relations for the division.

A WATCH, a 45-year service pin and a scroll is presented to Jack Fitzgerald, with 48 years service as a printing pressman, by James Taylor.

PART of the new 22,000 square foot plant addition at Revere Corporation of America.

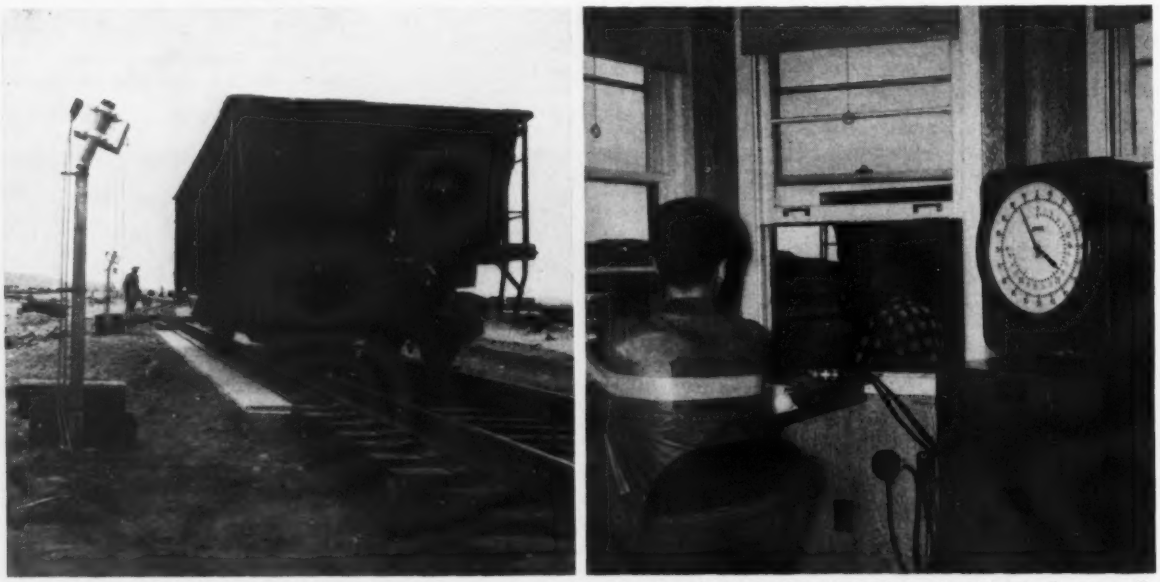
Revere Research Brings A New Company to Connecticut

MUCH fanfare is currently being given to the manufacturing concerns which are moving into the south and the west. Publicity and advertising in newspapers and the trade press extol the claims of cheap labor and local tax exemptions in these areas. But comparatively little mention is made of the established businesses which are coming to New England or of the reasons why New England, rather than some other part of the country, was chosen.

The Revere Corporation of America in Wallingford has been instrumental in recently bringing a well established business into Connecticut. A leader in its field, the Cox and Stevens Electronic Scales Division, formerly the Cox and Stevens Aircraft Corporation of Mineola, Long Island, is now a manufacturing division of the Wallingford company. Revere Corporation of America manufactures precision instruments and components for the aircraft and other industries where accurate control of liquids and temperature is a requirement. The outstanding research, development and engineering facilities of the company, manned by a staff with a broad background of experience in the electro-mechanical field, were primary factors in the decision to bring the electronic concern to the state.

Cox and Stevens Electronic Scales

Probably the best known product of the Cox and Stevens Electronic Scales Division is the aircraft weighing kit, a portable electronic device used to weight and to determine the center of gravity of airplanes. Hundreds of these kits have been engineered and manufactured for commercial airlines and for the Military Services. A continued research and development program has enabled Revere to provide units which will withstand not only the rigors of handling and transportation, but also the effects of humidity and exposure to the elements, while meeting, without excep-



IRON ORE car (left) being weighed while in motion on electronic railroad scale. Control and printing units (right) electronically record weights of moving railroad cars.

tion, all of the tests required by customers. Other electronic motion weighing systems for railroad and highway use have been adapted from the aircraft scale after extensive developmental programs.

Since the installation of the first Cox and Stevens Electronic Track Scale in 1949, the principal of automatic motion weighing has assumed great importance in modernizing railroad yards and in reducing costs of paper work. The railroad scale is essentially a simple weighbridge, usually 60 to 100 feet long, supported in a shallow pit by eight electronic load cells. These cells are electrically connected to an indicating dial, and to a recorder which prints or punches the car weight on the waybill card or on a tape. The printer is automatically actuated by photoelectric cells. Completely automatic systems have been developed which subtract the car's tare weight, arriving quickly at the net weight.

While most of the railroad track scales are used in conjunction with classification yards to automatically weigh cars as they pass over a "hump", two recent installations of the Iron Ore Company of Canada are of special interest. This company, in opening up the new Labrador fields, loads ore at Knob Lake in the interior and transports it over a 360 mile railroad to Seven Islands on the St. Lawrence for transshipment by boat. The railroad is, in effect, a huge conveyer belt and its efficiency is dependent on loading the cars to their weight capacity and on making fast turn-arounds.

At Knob Lake, an operator who controls the amount of ore pouring into a car, reads a Cox and Stevens scale to quickly fill the car to its safety limit. This scale, which is not designed for extreme accuracy, insures that the car carries its tonnage, rather than cubic capacity.

At the Seven Islands installation on the St. Lawrence end of the line, extreme accuracy is demanded of the electronic scale because the ore is invoiced by weight. This scale has been developed to weigh within an accuracy of .1 of 1% and automatically weighs over 100 cars in twenty minutes. The entire operation of mining and transporting ore in the Labrador fields has now become so efficient that the only limiting factor is the availability of ore carrying vessels.

Highway Scales

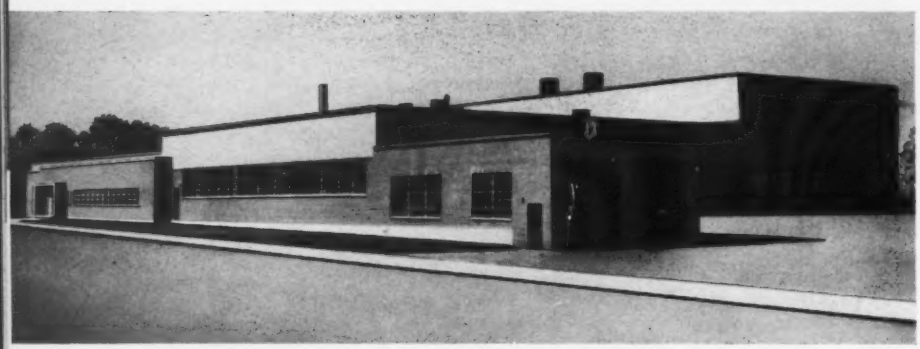
Cox and Stevens highway weighing systems have been developed both for traffic research and for enforcing state weight laws. Information on axle loadings, axle spacings, gross tonnage for any given period, traffic speeds and frequency, all of vital interest to the traffic and planning engineering of State Highway Departments, is automatically recorded by a Cox and Stevens traffic research installation. This basic traffic research data, which is collected without interfering with the normal flow of traffic, is of great importance in highway planning, in expediting traffic movement, and in in-

(Continued on page 38)

ELECTRONIC Weighing Kits, the size of suitcase, now weigh planes up to 400,000 pounds within .1 of 1% of the applied load.

HERE a Cox and Stevens highway scale electronically records axle leadings and spacings of moving trucks for traffic research.

ACCURATE BRASS Occupies New Home



NEW BUILDING of the Accurate Brass Corporation, located in Bristol. Building contains 60,000 square feet of floor space.

THE Connecticut industrial scene now has a new brass and aluminum forging plant in operation in Bristol as another positive indication of the growth of manufacturing in the state.

The Accurate Brass Corporation, a wholly-owned subsidiary of The Bristol Brass Corporation, is now in full operation in its new one-story plant at Pine and Emmett Streets in Bristol.

Accurate first started to occupy its new structure on October 15 and now all machinery and equipment have been moved from the original site of the plant in Glendale, New York, according to an announcement by Joseph O'Brien, President of Bristol Brass.

THESE PRESSES are used to trim the flash off of forgings as the materials move along the U-shaped production line in this modern Connecticut plant.

The new building, which houses the 35-year old Accurate concern, has 60,000 square feet of manufacturing space. It is modern in design with all operations on one floor and contains large areas of glass.

Accurate is one of the most important independent producers of brass and aluminum forgings in the U.S. Addition of these products fits in well with the Bristol Brass line of rod, strip, wire and extruded shapes and strengthens and diversifies the sales pattern of the Bristol parent company.

The Accurate building, one of the most modern forging shops in the nation, is a steel frame building with solid brick walls and steel sash. Offices and a reception area are adjacent to the main entrance.

The air in the plant is changed completely throughout the building every three minutes by means of positive ventilation and an exhaust fan system. The roof is steel deck with insulation and a new type of vapor seal that is approved for resistance to fire.

One innovation in plant layout is location of the receiving and shipping departments. Usually they are located in the same area in a plant. But in the Accurate factory they are at opposite ends of the U-shaped production line. Materials come in at one door and finished products are shipped out the other. Two cranes in the Receiving Department make handling of incoming materials swift and easy.

The new Accurate Brass plant has made provision to prevent stream pollution by having constructed a separate, properly equipped, building for the disposal of acids.

Since dies play an important part in making forgings, a drafting room has been located adjacent to the die-making area of the Plant for easy consultation between draftsmen and die-makers.

There are now approximately 200 men and women working in the Accurate plant, many of them from the Bristol area.

Some of the products made by Accurate Brass include: Brass door hardware such as handles and knockers, plumbing supplies including sink strainers, faucet parts, and copper tube fittings, electrical parts, wiring outlets and switch parts, aircraft parts including aluminum fittings and landing

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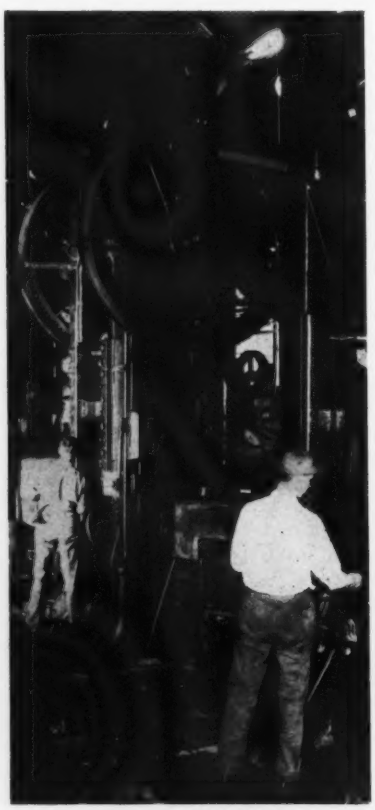

A BATTERY of 500-ton presses helps to stamp out forgings in the new plant.

TWO DIFFERENT VIEWS of S-55 and S-56 assembly lines at the Sikorsky plant in Stratford.

Expansion at Sikorsky

IN October, Sikorsky Aircraft dedicated its new, multi-million dollar plant in Stratford, making way for the ultimate employment of approximately 10,000 people in the manufacture of transport-type helicopters.

The new structure, on 250 acres bordered by the Housatonic River and Merritt Parkway, was financed entirely by United Aircraft Corporation. A substantial investment in an industry just 15 years old, the new plant indicates the faith of United Aircraft directors in the future of helicopters.

Stratford, chosen after consideration of many sites in the United States, was the scene of Igor Sikorsky's first flights in his VS-300, the first successful helicopter in the Western hemisphere. The VS-300 was built and flown on the grounds of what is now the Bridgeport-Lycoming division of AVCO. Military orders for subsequent Sikorsky helicopter designs moved Sikorsky Aircraft to its present location in Bridgeport.

The S-56 helicopter, a twin-engine aircraft destined for service as an assault transport with the U.S. Marines and the U.S. Army, is being built in the new plant, along with the S-55.

The S-55 is the first CAA certificated transport helicopter and now is in military, passenger, freight, mail and utility service throughout the world.

Production of the S-58, a 12-passenger helicopter now used by the Navy and Army and on order from United States and foreign commercial operators, will continue in the Bridgeport plant.

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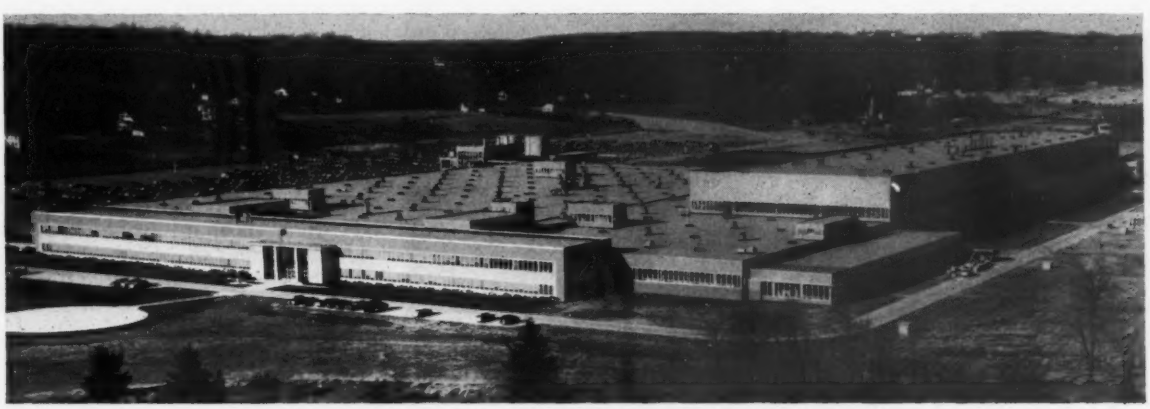

THE NEW PLANT of Sikorsky Aircraft in Stratford.

School Requests Prove Value of Career Booklet

A YEAR ago, four major Connecticut electric utilities gained prominent attention in introducing to our High Schools, a publication describing career opportunities in Connecticut plants.

Their objective was to assist high school youth in choosing a vocation by revealing the great variety of job opportunities our plants offer to Connecticut's young men and women.

The publication, "There's a Career For You In Connecticut Industry", was distributed to 90% of the state's High Schools, and enough booklets were made available for students of one entire class in each school to receive individual free copies.

A TYPICAL VIEW of a Connecticut High School class discussing future opportunities in Connecticut industrial plants with the aid of the guidance booklet, "There's A Career For You In Connecticut Industry." The above shows a class at Hamden High School with Guidance Director William B. Flaherty, right, leading the discussion.

REPRESENTATIVES of the four Connecticut electric utilities who sponsored the booklet watch the first finished copies for this year's classes roll off the binder. Left right, Eben B. Haskell, United Illuminating Company; Edward I. Rudd, Jr., Connecticut Power Company; Justin H. Ahrens, Hartford Electric Light Company; E. A. Davidson, M. H. Davidson Co., printers; and George Hanel, Connecticut Light and Power Company.

The companies engaged in the effort were: Connecticut Light and Power Company; Connecticut Power Company; Hartford Electric Light Company and the United Illuminating Company.

It was the original hope of the sponsors that the project would be considered valuable enough to be renewed in future years. However, before publishing a second edition in 1955, the four utilities decided to analyze the value of the 36-page publication, as a teaching device for the teacher, and as a useful piece for the student.

Questionnaires were sent to the schools and one finding was more significant in influencing their decision than any other: Virtually every school requested copies again. This was the expression looked for with the greatest interest. It was wanted. It filled a definite scholastic need!

Another decisive fact learned from the questionnaires was that although there was no scarcity of industrial job-description material available to schools, none of the data pinned down the specific Connecticut opportunities in a precise, realistic manner.

"We have been told by school officials that students learned for the first time of the presence of some of these fields—and that even teachers were able to obtain a more practical picture of industrial opportunities in Connecticut, as a result of the publication," the utilities report.

The most practical feature of the publication's format is that each of the careers is outlined by someone who has climbed up the ladder in that particular field, and who can talk from actual experience, about the training necessary, the chances of job advancement and the personality qualifications.

The questionnaires also indicated that most schools did more than hand booklets out to students. They actually used them as media for class discussion of one form or another.

(Continued on page 60)

Achieving Communications Impact With Visual Media

By ROBERT D. BRETH

Lecturer and Consultant in Communications

The author of this article is a management consultant specializing in human relations and communications, particularly in the field of management relationships with employees, customers, stockholders, and the community. Besides originating and teaching courses on this subject at Lehigh University (undergraduate) and at the Drexel Institute of Technology (graduate), he also edits and publishes QUOTES ENDING, a nationally distributed newsletter on trends in communications. He has also written many articles and one book on the subject.

Mr. Breth was the first recipient of the Annual Award for the Advancement of Communications originated by the Delaware Valley Industrial Editors Association and is one of the few people in the country to have received six consecutive top awards from Freedoms Foundation for the Advancement of the American Way of Life.

He is also a Vice President and a member of the Executive Committee of the A. J. Wood & Company, national marketing and opinion Research agency with headquarters in Philadelphia.

THE term "Impact" can mean many things, but in this context it is the fourth element in the Sequential Process of Communications which consists of an unbroken chain of six elements:–Intent-Content-Media-Impact-Opinion Change and Behavior Change.

In this process or chain, Impact is also the sum total of the Action Phase elements (Intent - Content - Media) which are originated by the Communicator, and the first of the Reaction Phase elements (Impact-Opinion and Behavior Changes) which originate with the Recipient.

Visual Media are those which depend upon a sight impression alone to achieve Impact. This group embraces such media as Bulletin Boards, Posters, Handbooks, Manuals, Annual Reports, Employee and Customer Periodicals, Pamphlets and Brochures.

In any or all of these media, Impact is achieved by a combination of headline, body and caption text, artwork, color and photographic or other type of pictorial illustration.

ROBERT D. BRETH

The question is—just what combination of these elements assures maximum Impact and is there any method of gauging this Impact in advance?

The answer is "yes", with certain reservations. These reservations include: 1) the editorial and technical skill of the artist, writer, photographer and/or editor who prepares the material—which is an unknown quantity, and 2) the application of the measurement gauge to illustrative material alone (i.e. the illustrations used and not the headline, body or text typography used).

With these reservations accepted, it is possible to break down illustrative Impact techniques into basic components, and to apply a measurement formula to these components, the sum total of which will provide a reasonable degree of accuracy in determining illustrative Impact in advance of actual printing or publication.

The Impact Profile of Illustration Effectiveness, which will be described shortly, has resulted from a series of experiments conducted among undergraduate and graduate college students. The experiments were based on the illustrative material used in Visual Presentations prepared by the students themselves. They were conducted over a period of five years and involved 23 separate groups of students averaging 20 students per group. Of the 460 students who participated in these experiments 210 were graduate students of Drexel Institute of Technology averaging 31 years of age, the remainder being predominately senior students of Lehigh University, averaging 22 years of age. These students either held degrees in or were majoring in the following occupational areas and proportions: Engineering (14%), Sales Administration (10%), Accounting (18%), Personnel Administration (22%), Production Administration (15%), Economics or Finance (14%), and Miscellaneous (7%).

In these experiments each member of each group of students was given the same assignment, which was to visualize the lecture notes on "The Sequential Process of Communications" by some form of graphic illustration. The students were told nothing about illustrative techniques but were merely instructed to capture the essence of

AUTHOR'S NOTE:—*The material in this article is taken from copyrighted lecture notes used in "Communications in Industry" and "Human Relations and Communications" courses at Lehigh University and Drexel Institute of Technology. Permission for reprint or republishing purposes must be requested direct from the author.*

** Selected from one group of 25 undergraduates, Fall Semester, 1954 Lehigh University.*

the lecture notes with some form of illustration embodying the use of as few words as possible.

At the following session, each student was requested to display his illustration to the class, and describe it orally within a two minute time limit. All members of the class were supplied with scoring sheets and were requested to grade each Presentation, according to Clarity, Completeness, and Originality—using a 3, 2, 1 scoring formula for each component, which permitted a maximum high score of 9 and a minimum of 3 per each illustration viewed by each student.

This procedure provided a subjective or *personal* opinion rating for each illustration as a more or less surface evidence of Impact.

Following this phase of the experiments, each class was given a "break" of ten minutes, and presumably (to the students) the incident was closed, thus providing an element of mental and physical relaxation to keep them off guard.

After the break, the students were then requested to reverse their score sheets and record from memory all of the illustrations they could recall, coining a brief title to describe each one. In this way an *objective quantitative* measurement of the Impact of each illustration viewed was secured from each student. Obviously, the illustrations remembered by the most students possessed a degree of Impact directly proportionate to the number of students who recalled them.

Upon the completion of this procedure, the students were then given another unstructured assignment. The original score sheets with the quantitative remembrance data were collected, following which each student was then asked to write a description of the three illustrations remembered which were "liked best", with reasons why and in the order of liking.

This procedure provided an *objective qualitative* measurement of the Impact of each illustration. Obviously, the depth of the Impact would show up in the tabulation of the number of students who liked the same illustration or illustrations best.

At the completion of each experiment, the results of this three-phase measurement of both subjective and objective quantitative and qualitative Impacts were tabulated and analyzed, with the following results:

Those illustrations which scored highest in original point scores (subjective measurement) were: remembered by most (objective quantitative measurement); and liked by most (qualitative measurement); were then analyzed to determine reasons why. From this analysis a list of editorial and technical characteristics emerged which generally can be used as a measurement formula of illustration effectiveness in terms of overall Impact. These editorial characteristics are as follows:

a. ***Association***—The illustrative theme was easily identified and associated with a subject of universal appeal to the students; Mickey Mouse, Donald Duck, Dating girls, Parking lots, etc.

b. ***Simplicity***—The illustrative theme was easy to grasp and follow: A Presentation of several pages with a one faceted illustration on each page had more Impact than a Presentation consisting of a several-faceted illustration on one page.

c. ***Humanization***—Drawings or pictures of people had more Impact than depictions of scenes, objects or abstract concepts: A man using a telephone was remembered easier than just a telephone.

d. ***Animation***—Implied movement scored higher than static position: Man pointing, walking, etc., was remembered easier than a man standing or seated in repose.

e. ***Sex***—(modified usage)—Sexual connotation generally scored high quantitatively, but only scored high qualitatively when the tie-in with the subject theme was appropriate. (Sex alone, as sex, did not score high in best liked).

f. ***Humor***—Illustrations which contained an element of "tasteful" humor scored high in comparison to strictly serious treatment. "Distasteful" humor scored only in the medium range of remembrance Impact.

g. ***Artistic Skill*** — Illustrations which followed general rules of layout, composition, harmony and illustrative skill scored higher than those which were deficient in one or more respects.

The technical characteristics were:

a. ***Size***—Generally, the larger the Presentation, the higher the quantitative or remembered by most score, but this same factor had little effect on qualitative scores: 22″ x 34″ illustrations were remembered by more students than 8½″ x 11″ sizes. But most of the "best liked" and "remembered most" illustrations were found in the 11″ x 17″ or 17″ x 22″ sizes.

b. ***Dimensional Effect*** — The highest total Impact in any one group was found with illustrations that were tangibly executed in three dimensions.

c. ***Artwork***—The use of cartoons, caricatures or other forms of symbolized drawings were found in all three of the highest ratings of Impact.

d. ***Color***—One or more colors in addition to black were found in all illustrations which scored in the highest ratings of Impact.

e. ***Photos***—When used alone in black and white they were found in the medium range of rating scores of Impact. When used in color or combined with Artwork, they were found in the highest rating scores.

f. ***Drawings***—These are simply a combination of words and lines, and/or shaded or enclosed areas in squares or circles, such as Flow Charts, Maps, Diagrams, Bar-Graphs, Charts Graphs or Tables. When used alone in abstract concepts of black and white they were rarely remembered and never liked best. When used with Color, Artwork or Photos, however, the Impact Score tended to increase considerably.

Impact Profile of Illustration Effectiveness

The above analysis contains all, or at least the great majority of the important elements which enter into the makeup of a Visual Presentation. By arranging these elements in tabular form and comparing any given illustration or ilustrations to this form it is possible to secure an Impact Profile of Illustrative Effectiveness.

The practicality of this is demonstrated in the following tabular analysis of FIVE of the highest Impact illustrations submitted by the students and

FIVE of the lowest Impact Illustrations.* These illustrations and their scores are as follows:

The two extremes of subjective, and objective quantitative and qualitative Impact shown here are typical of the results found throughout the experiment.

It will be noted in the "highest" rating group, that the three ratings used did not parallel each other exactly in order of standing as far as individual illustrations are concerned, but they did parallel each other as a group.

It will also be noted that both the "highest" and the "lowest" rated groups have a common bond within themselves—i.e. the top group are pictorialized illustrations, while the bottom group are all "Drawings" of the Flow Chart variety.

In the following table, these same two groups of illustrations have been analyzed in respect to their individual editorial and technical characteristics.

The numerical ratings used in this table are arbitrary and simply designed to convert word descriptions into numerical descriptions. Thus: 3 = High degree of attainment; 2 = Medium Degree; 1 = Low Degree; O = Not present.

No attempt has been made to weigh any of the factors as a indication of their relationship to each other or the whole. Admittedly, this type of numerical measurement is crude, but it provides a far better gauge than guesswork or intuition based on generalities.

It will be noted in examining the foregoing table that there are seven Editorial and six Technical Characteristics which may or may not be present in any given illustration. Further, if they are present they may be found in a degree ranging from a high of (3) to a low of (1), or if absent (0).

Theoretically, the highest possible rating would be (39) (13 characteristics x 3). The lowest rating would be found somewhere between (0) and (9). Knowing this, it is then possible to reconvert the total numerical score of any given illustration into a word equivalent by the following method:

FIVE HIGHEST SCORES

Illustration Theme	Subjective Score Pos.	Subjective Score Percent	Objective Quantitative Pos.	Objective Quantitative Percent	Objective Qualitative Pos.	Objective Qualitative Percent	Total Impact Rating Pos.	Total Impact Rating Percent
Mickey Mouse	1	91%	2	76%	1	55%	1	222%
Divorce Sequence	4	87%	1	80%	2	21%	2	199%
Dating Girl	5	84%	1	80%	4	16%	3	180%
Election Candidate	3	88%	3	68%	3	23%	4	179%
Beer Distribution	2	90%	4	56%	4	16%	5	162%

FIVE LOWEST SCORES

Illustration Theme	Subjective Score Pos.	Subjective Score Percent	Objective Quantitative Pos.	Objective Quantitative Percent	Objective Qualitative Pos.	Objective Qualitative Percent	Total Impact Rating Pos.	Total Impact Rating Percent
Stick Figures	20	69%	23	16%	—	00%	21	85%
Flow Chart	22	67%	25	8%	—	00%	22	75%
Flow Chart	23	66%	—	00%	—	00%	23	66%
Flow Chart	24	65%	—	00%	—	00%	24	65%
Flow Chart	25	64%	—	00%	—	00%	25	64%

Impact Profile of Illustration Effectiveness

Numerical Range Rating	Word Rating
0 to 9	Definitely Ineffective
10 to 19	Barely Effective
20 to 29	Effective
30 to 39	Very Effective

A comparison of this numerical "Profile" with the subjective and objective measurements previously established shows a definite relationship. From this data it can be seen that it is possible to gauge the general effectiveness of illustrative material in advance of actual use—or better still, to use these findings to prepare Illustrations which have built-in Impact.

Conclusion

The conclusion to be drawn from these findings is rather obvious—if you are going to use an illustration to help attract and hold a reader's attention to purely visual material, it had better be an effective one.

To be most effective, the illustration must be one that is easily *associated* by the reader with something he already knows; it should be *simple* to grasp; it should be *humanized* and not abstract; it should depict movement or *animation;* if sex can be used tastefully, do so; it should contain some *humor* and the *artistic skill* should be at least fair.

Technically, the illustration must be of a size that requires no strain to see; it is better in three *dimensions* than two; it should contain *Artwork, Color* or *Photos,* or better still some combination of all three. Finally, it *should not be* a graph or chart in plain black and white.

If these principles are kept in mind and followed, any illustrative material will contain a built-in Impact which will increase the effectiveness of the verbal words or printed text which accompanies it.

* *Selected from one group of 25 undergraduates, Fall Semester, 1954 Lehigh University.*

Impact Profile of Illustration Effectiveness

Characteristics Found	Mickey Mouse	Divorce Sequence	Dating Girl	Election Cand.	Beer Distr.	Stick Figure	Flow Chart	Flow Chart	Flow Chart	Flow Chart
Editorial										
Association	3	3	3	3	3	1	0	0	0	0
Simplicity	3	1	3	3	1	1	2	1	1	3
Humanization	2	3	1	2	1	1	0	0	0	0
Animation	2	3	3	2	1	1	0	0	0	0
Sex	1	3	1	0	0	0	0	0	0	0
Humor	3	3	2	3	1	1	0	0	0	0
Artistic Skill	3	2	2	2	3	1	1	1	2	1
Technical										
Size*	2	3	3	3	3	3	2	2	1	1
Dimensional Effect	3	2	2	2	2	2	2	2	2	2
Artwork	3	1	2	2	3	2	1	1	2	1
Color**	3	3	2	2	3	0	0	0	0	0
Photos	0	3	0	0	3	0	0	0	0	0
Drawings	0	0	0	0	0	3	2	2	2	1
Total Values	28	30	24	24	24	16	10	9	10	9

* 3 = 17" x 22" or over 2 = 11" x 17" to 17" x 22" 1 = 8-1/2" x11" to 11" x 17"

** 3 = 3 colors or more 2 = 2 colors 1 = 1 color

New Products: *Why Needed and Hints on Developing Them*

Contributed by The Connecticut Chapter, American Marketing Association*

IF YOU have been thinking about new products to sell or manufacture, you are not alone. Many companies in Connecticut are giving time and energy to the same problem. For some it is only a vague awareness of the need for diversification. For others it is the objective of a formal program with written procedures and time schedules. Whether you have five employees or five hundred, whether you make one product or many, whether you sell directly to the public or make parts for some other manufacturer, there are two fundamental reasons why you need a new product program. They are (1) protection against product obsolescence, (2) protection against falling profit margins.

Product obsolescence is an insidious thing. It may be happening to your products at this moment. Usually a result of a shift in consumer preference or a major technological invention, it does not happen overnight but there have been cases where entire markets have gone in a matter of two or three years. Unless you have very intimate and sensitive knowledge of the markets you serve you have little advance warning.

The rate of product obsolescence has speeded up. After Edison made the first working model of his incandescent lamp in 1879 it took him ten more years to develop his invention commercially and two more decades passed before it was a serious threat to kerosene and gas as a means of home lighting. The scores of Connecticut concerns who were prospering from the manufacture of kerosene lamp parts and gas fixtures had almost three decades to take heed and find new products. If such an event took place today the change would come about much more rapidly because of our greater wealth and our mass communications and advertising.

Falling profit margins on old and established product lines seem to be part of the modern business picture. The reason is clear. Fixed charges and overhead have risen faster than product output. If you are faced with this problem, the logical solution is to find new products which will keep your resources busy to full capacity at all times. If sales of your product vary widely during the year; if you are selling an item which sees major ups and downs over an extended period of time; if you have "excess" plant or supervisory talent available—then you need new products to spread your fixed costs and bring in more profit from your regular product lines.

Truly "new" products, inventions, begin with ideas and ideas can come from many sources. The best ones, however, come from people inside or close to an organization and who have a good general knowledge of existing production facilities and markets. In this respect the small manufacturer may have just as good a chance as the larger manufacturer. Although the latter has many more people to call upon for ideas and suggestions, most of these people are specialists and their ideas seldom relate to the whole situation. The small manufacturer may have only a few people such as co-owners, directors, his salesmen and production employees to call upon but these few may be familiar enough with the general situation to offer many practical new product ideas. It is also likely that truly creative "idea" people prefer to work in the smaller companies.

Very little is known about the creative process—the source of all original new product ideas. Creative ideas are fragile things, easily laughed out of existence.

One good rule to follow when gathering new product ideas is, "Don't apply the brakes of logic too soon". About the best thing you can do is to let your associates know that ideas are welcome and that none will be ridiculed. As suggestions and ideas are submitted write them down and then, at a later date, review them. After you have matched up the obviously similar ones and rejected the obviously implausible ones you will have only a few left for final screening and testing. This is really the beginning of your new product program.

Large corporations usually approach the problem of new products in a methodical manner. In addition to a Sales Department they may have departments specializing in research and development, market research, engineering. The heads of these departments plus other executives may make up a Product Idea Committee or New Product Committee. The function of such a committee is to gather ideas, screen them and assign them to the most logical department for development. Since most of the people on such a committee are specialists they look for new product possibilities in the fields that they know best. For example, a sales manager might call upon his men in the field to make periodic checks of all customers and to report on any new product needs. A research director might carry on a review of all patents in the U. S. Patent Office Gazette and in trade publications and a market research director might scan various growing markets to find trends which show a need for new products.

Of the many books and pamphlets dealing with new products, most consider the subject from the viewpoint of the larger concern. There is one recent publication which should be useful to you whether you have a full scale program or whether you have to act as a one-man New Products Committee.

It is DEVELOPING AND SELLING NEW PRODUCTS—A GUIDEBOOK FOR MANUFACTURES (Second Edition). It was written by Gustav E. Larson and published jointly by the U. S. Department of Commerce and the Small Business Administration. This booklet is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25 D. C. and will

(Continued on page 36)

** This article was a collaboration by Albert Chapple, Market Research Department, Perkin-Elmer Corp., Norwalk; A. D. Cronk, Promotion Manager, Patent Button Co., Waterbury; and Robert H. Fisher, Product Line Planner, Hardware Division, Stanley Works, New Britain.*

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NEWS FORUM

This department includes a digest of news and comment about Connecticut Industry of interest to management and others desiring to follow industrial news and trends.

The Cover

THIS MONTH'S cover photo shows precision inspection facilities at Haydon Mfg. Co., Inc., Torrington. Here an inspector compares hole locations on a Swiss Comparator.

HARVEY L. SPAUNBURG, president of Veeder-Root, Inc., Hartford, was elected a vice president of the MAC at the annual meeting of the Board of Directors held at the Hartford Club, Hartford, December 12, 1955. He will replace Dexter D. Coffin, president, C. H. Dexter and Sons Co., Windsor Locks, who held this post in 1955, but on account of heavy business commitments withdrew his name as a candidate for reelection.

Other officers reelected were: Albert S. Redway, president, Rockbestos Products Corp., president; Harrison Fuller, president, Fuller Merriam Co., West Haven, vice president; and John Coolidge, president and treasurer, The Connecticut Manifold Forms Co., West Hartford, treasurer.

HARVEY L. SPAUNBURG

Mr. Spaunburg joined the Root Company of Bristol in 1919 as a foreman, later becoming superintendent of the Bristol plant. Following the merger of the Root Company with the Veeder Co. of Hartford, to form Veeder-Root, Inc., he became chief engineer of the new corporation. Shortly afterwards he became factory manager and secretary. In 1942 he was elected a vice president and in 1944 a director. In 1950 he was elected executive vice president and in 1954 was elevated to his present post of president of Veeder-Root, Inc.

Mr. Spaunburg is a director of the Connecticut Bank and Trust Co., Hillyer College, Veeder-Root, Ltd. and Veeder-Root of Canada, and Holo-Krome Screw Corporation, a division of Veeder-Root, Inc.

He is a member of the Hartford Club, the Hartford Golf Club, the Newcomen Society and the American Society of Mechanical Engineers. He is also a 32nd Degree Mason and Shriner.

★ ★ ★

NEW DEPARTURE Division of General Motors Corporation, operating plants at Bristol and Meriden in this state and Sandusky, Ohio, experienced its biggest production year in history during 1955, according to an announce- by Paul W. Rhame, New Departure's general manager.

New Departure manufactures ball

bearings, bicycle coaster brakes and front wheel hubs as well as automatic transmission parts. The GM Division leads the world in the production of ball bearings.

★ ★ ★

PIERCE M. WELPTON has been elected chairman of the board of Bridgeport Rolling Mills Company, Bridgeport, it has been announced by Robert L. Wentz, president. Mr. Welpton has been a director since he and Mr. Wentz purchased the company in 1954.

Mr. Welpton formerly was director of a division of American Standard, vice president of American Thread Company, and assistant to the vice president of United States Steel Corporation.

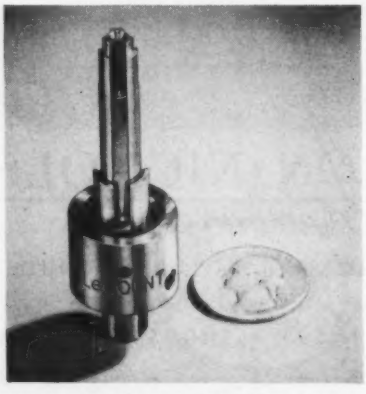
George D. Stearns, former chairman, will continue as a director and will be active in the management of the comwith which he has been associated for over 35 years.

★ ★ ★

PLANS for a 1956 construction program totaling $46 millions were reviewed by directors of The Southern New England Telephone Company at a recent meeting of the board.

The directors met in Hartford to see equipment being installed for "direct distance dialing," starting next June.

The 1956 construction budget, largest in the company's history, compares with $40.5 million spent in 1955. Vice President Ernest A. Johnson revealed that the 1956 budget was allocated as



THIS PINT-SIZED Le Count Special miniature mandrel solved a competitive production problem. It supplied a rugged and accurate means of holding and locating a precision aircraft part for semi-automatic finishing grinding to a shoulder, typical of the role of special precision mandrels in lowering the cost of specialized production.

follows: Land and buildings, $5.8 millions; central office equipment, $11.8 millions; telephone equipment on customers' premises, $13.6 millions; outside plant, $13.5 millions, and general equipment, $1.6 millions.

At the same session the directors elected John Lashnits a vice president of the company, in addition to his previous position as general counsel.

★ ★ ★

SCOVILL MANUFACTURING COMPANY, Waterbury, recently entertained a group of 200 engineers, members of the Southern Connecticut Section of The American Society for Quality Control.

The members of the Society, who share a common interest in the establishment and maintenance of controlled quality standards in commercial production, met at Doolittle Hall and then proceeded on a tour of the Scovill Casting Shop, Tube Extrusion and Continuous Strip Mill, most modern installations of their types in the brass industry.

★ ★ ★

THE COMMERCE SECTION of the Connecticut Development Commission is being revived, according to a recent announcement by Sidney A. Edwards, the agency's managing director. The services of the Commerce Section were discontinued in July 1953 following a reorganization of the Commission's activities.

The first project to be handled by the reactivated section will be the preparation of a comprehensive "Connecticut Purchasing Guide." The Guide will list all of the nearly 20,000 products manufactured in Connecticut along with the names of the manufacturers producing them. When completed, the guide will be sent to purchasing agents throughout the United States and the English-speaking world. It is planned to publish the guide at three-year intervals.

★ ★ ★

A NEW DUAL use hot water circulator has been announced by Econo Products Co. of East Haddam. New design changes in the company's Magic Head Circulator incorporate a motor with a built-in thrust bearing, that now permits the circulating pump to be used as either a horizontal or vertical circulator.

★ ★ ★

ELECTRO-FLEX HEAT, INC., Hartford, has announced new electro-thin heating elements measuring only .032 inches or less in thickness. They are designed for use in electronic equipment, crystal ovens and in other applications where excessive thinness is a requirement. This thinner element adds to the Electro-Flex line of regular units.

★ ★ ★

HERMETICALLY sealed ultrasonic power transducers and improved generators operating at 40 kc/sec have been announced by Branson Ultrasonic Co., Division of Branson Instruments, Inc., Stamford. According to the manufacturer, sharply reduced cost and versatile design of the transducer makes it possible to apply ultrasonic energy to many applications which had previously been considered impractical or economically unfeasible.

The large, uniform radiating surface

ROBERT P. STACY, left, vice president of The Connecticut Light and Power Company, recently presented a certificate to Frank J. Mellon, second right, CL&P Essex district manager, in recognition of a record of 1,000,000 man-hours free of lost-time accidents. The award was from the Edison Electric Institute. Shown also are Robert L. Lagerquist, second left, supervisor of welfare, claims and safety, and Walter J. Regan, right, chairman of the winning district's safety committee.

of the transducer makes it particularly suitable for ultrasonic metal cleaning applications, such as removal of buffing compounds, radioactive contamination, soldering flux, plaster, carbon smut, etc. The transducers can also be used for other processes in liquids which benefit from ultrasonic energy, such as quenching, plating, pickling, descaling and dyeing.

★ ★ ★

ANNOUNCEMENT of the appointment of John R. Shrewsbury as field supervisor of air conditioning sales has just been made by Flexible Tubing Corporation, Guilford. Mr. Shrewsbury was formerly district manager for National Homes Corporation in the West North Central area, and for four years was district sales representative for Arvin Industries, covering New England and New York State.

The company also announced the appointment of Walter C. Burns as manager of Western Operations. Mr. Burns was formerly general sales manager of the Industrial Rubber Products Division of Pioneer Rubber Mills, San Francisco. He will make his headquarters at Flexible's plant in Los Angeles.

★ ★ ★

A NEW 12-page illustrated booklet published by Waterbury Farrel Foundry and Machine Co., Waterbury, gives details on the wide range of two-high wire flattening mills and auxiliary equipment produced by the company.

The booklet points out that this equipment is custom-engineered for specific applications in flattening ferrous, non-ferrous and clad metal wire in diameters from a few thousandths of an inch up to one inch at speeds approaching 3,000 fpm.

Extensively illustrated, the booklet shows a variety of single and multiple stand mills built by the WF Rolling Mill Machinery Division. Approximately half of the booklet is devoted to the auxiliary equipment available for a complete mill installation.

Free copies of the booklet can be obtained from the company.

★ ★ ★

HAROLD NOHE was recently elected treasurer of Heli-Coil Corporation, Danbury, at a meeting of the company's board of directors.

Mr. Nohe will continue to serve as secretary and controller of Heli-Coil, which manufactures screw thread inserts and related fastening products.

★ ★ ★

THE ACQUISITION of Warren Electronics, Inc., specialists in ultra violet spectroscopy, by The Perkin-Elmer Corporation, was announced recently by Richard S. Perkin, president and chairman of the board.

Warren Electronics was formed in 1951 by Charles W. Warren as a development company providing electronic and instrument consulting capacity to the chemical industry. The firm is best known for the Spectra-

cord, a full-automatic, high-speed ultra violet recorder. For the present, Warren Electronics will continue operations in its Bound Brook, New Jersey plant as a subsidiary of Perkin-Elmer, with Mr. Warren remaining as president.

★ ★ ★

THE KAMAN AIRCRAFT CORPORATION, Bloomfield, marked the tenth anniversary of its incorporation recently.

The company, founded by Charles H. Kaman, had its beginning in the cellar and garage of the home of its founder's mother. It now employs about 1200 persons and occupies over 200,000 square feet of factory and office space in Bloomfield, Hartford, Windsor Locks and Suffield. In addition, there is a Canadian subsidiary, Kaman Aircraft of Canada, Ltd. In 1954 Kaman Aircraft's sales volume exceeded thirteen and a quarter million dollars. The volume of business for 1955 exceeded that of 1954, according to president Charles H. Kaman.

★ ★ ★

CLIFFORD A. BROOKS has been named advertising manager for the Pratt & Whitney Company, Inc., West Hartford. He succeeds Vas L. Howe, who has resigned.

Mr. Brooks has been an employee of the company since he first attended its apprentice training course in 1940. After serving for three years a lieutenant in the Chemical Corps of the Army from 1943 to 1946, he returned to the company to complete the course and later become a sales demonstrator of machine tools. He joined the advertising department in 1949.

★ ★ ★

JOHN W. DANIELS has been promoted to superintendent of the Connecticut Corrugated Box Division of Robert Gair Company, Inc. at Portland, manufacturers of paperboard and paper products, William T. May, Jr., vice president in charge of container operations, has announced.

Mr. Daniels started work at Gair's Thames River Division, Uncasville, in 1926. In 1940 when the company opened the new plant in Portland to handle its container operations in that area, he joined the maintenance department there. In 1943 he was promoted to foreman of that department, and in 1945 was appointed assistant superintendent of the plant.

HARRY A. CROSS, president of The George P. Clark Company, Windsor Locks, manufacturers of materials handling equipment, has announced the appointment of The Specialty Company, Inc., of Lakeville, to represent the Windsor Locks firm in Eastern New York, Eastern Massachusetts, Rhode Island, and the Connecticut counties of Fairfield, New Haven and Litchfield.

★ ★ ★

ADDITION of the new flange-mounted "150" series of oil burners for the popular-priced home market has been announced by The Carlin Company, Wethersfield, manufacturers of the U. S.-Carlin line of domestic, commercial, and industrial burners. The new burners are designed for flange mounting to all furnaces, boilers, and water heaters with minimum tube openings of 4¼" diameter.

Because combustion chamber sizes have been reduced as a result of today's trend to smaller boiler and furnaces, clean firing has become more important than ever. According to the manufacturer, the new 150 series burners produce both a cleaner and hotter fire.

★ ★ ★

PLANS for a long-range building expansion program that will add 200,000 square feet to the main plant and home offices of Pitney-Bowes, Inc., at an estimated cost of $3 million were announced recently by the postage meter company.

The program is expected to take about two years to complete and will provide eventually for 1,700 employees, about 300 more than the company now employs at Stamford, said Walter H. Wheeler, Jr., president. Pitney-Bowes also employs about 2,000 men and women through the 94 branch and district offices which comprise its nation-wide sales and service organization.

★ ★ ★

ABILITY on the job and length of service with the company are two important measures of success which should be recognized, Judson C. Travis, president of Handy & Harman, told long-service employees of the company's Bridgeport plant at a dinner recently at the Stratfield Hotel.

Thirty-four employees were honored for long service, and another twenty-two employees who have been with the company for 25 years or more also attended.

The company maintains a profit-sharing plan tied in with an employee's earning ability and an annuity-pension program which recognizes long service.

★ ★ ★

THE ELECTION of Eduard Baruch as executive vice president of Heli-Coil Corp., Danbury, has been announced by Louis R. Ripley, president of the company.

Mr. Baruch was instrumental in forming Heli-Coil in 1949 and has been vice president in charge of sales and a director of the firm since that time. His business career began with the Irving Trust Co. of New York, where he was in the Special Loan Division and a Trust Administrator for several years. He then served as vice president and sales manager of James H. Rhodes & Co., Chicago, and was later national sales manager of the Vending Division of Pepsi Cola Co.

★ ★ ★

WILLIAM H. LEHMBERG has been elected president of American Felt Company, Glenville. He will succeed John T. Lawless who has been president since 1931 and has served as board chairman as well as president since February 1955. Mr. Lawless will continue as chairman of the board.

Mr. Lehmberg, who has been executive vice president of the company since 1953, is also president of The Felt Association, the national trade group in the industry whose membership consists of manufacturers, cutters and distributors, and is the former chairman of the association's Technical Subcommittee as well as its Committee on Standards and Marketing.

Associated with American Felt Company since May 1943, Mr. Lehmberg began as director of engineering in the company's Engineering and Research Division. In 1949 he was made manager of the Glenville manufacturing plant and was elected a vice president in 1950.

American Felt Company is the world's largest manufacturer of wool felt and felt products including synthetic fibre felts, converted cut felt parts and molded felts. The company produced hundreds of different types of felts which have wide industrial applications for vibration absorption, lubrication, filtration, sound absorption, sealing and metal polishing, as well as innumerable uses in the manufacture of automotive aviation, railroad, electrical and farm equipment, footwear, clothing and musical instruments.

★ ★ ★

ANNOUNCEMENT of the election of David R. Anderson to be vice president—controller and George F. McDonough to be vice president—industrial relations of the Pratt & Whitney Company, Inc., West Hartford, was made recently by A. H. d'Arcambal, president.

Mr. Anderson has been controller of the company since 1952 and Mr. McDonough, who joined the organization with its Chandler-Evans division in 1942, has been manager of industrial relations since 1945.

★ ★ ★

"PLANNED PROGRESS FOR 1956" was the central theme of a seminar held recently at Hotel Statler in Hartford for top officials of the New Haven Railroad.

The three-day meeting, called by President Patrick B. McGinnis, was attended by more than 150 top executives and supervisors. Each department of the railroad sponsored an exhibit in the Hartford room of the Statler in order to familiarize the participants with projects in the planning stage.

THE ANNUAL SALES MEETING of Clark Bros. Bolt Co. was held recently at the company's Milldale plant under the direction of O. G. Knapp, president, and Dudley H. Smith, vice president in charge of sales.

The program included a plant tour, packaging clinic and dinner meeting at which 1956 production, cataloging and sales promotion plans were outlined.

★ ★ ★

A NEW HIGH SPEED production method developed by The Bodine Corporation, Bridgeport is designed to solve production problems in the assembly of nuts and screws in the setting of auto headlamps on new models. The physical assembly problems were that the nylon nuts used were unthreaded, and the assembly had to be accurate within two turns.

Bodine Corporation solved both the economic and mechanical problems by equipping a standard basic tapping machine with a dial feed and four automatic hopper feeds— two hoppers deliver nuts and two deliver screws. The screws are used as taps and are driven into the unthreaded nuts in twin operations which take less than two seconds.

★ ★ ★

A REALIGNMENT of the General Electric Company's organization with a principal aim of better meeting the needs of an industrial electronics business, which is expected to double in size in the next five years, has been announced by G. E. President Ralph J. Cordiner.

In his announcement, Mr. Cordiner cited "enormous" increases in the use of computers, automation, and semiconductors as among the major factors in the anticipated increase in electronics by 1960.

In the realignment six company components operating in the field of producers' and military electronics were assigned to the General Electric Electronics Division. In addition, an industrial electronics laboratory, an industrial computer section, and an electronics business study were established in the division, which is headed by Dr. W. R. G. Baker, vice president and general manager.

★ ★ ★

THE APPOINTMENT of William F. Drake as executive vice president of The SoundScriber Corporation, New Haven has been announced by Joseph H. Hoyt, president.

With SoundScriber since 1949, Mr.

Drake started as sales manager of the Detroit territory. He also served as middle west district sales manager and later was appointed special factory representative to the Air Force. In 1952 he was named vice president of SoundScriber's sales subsidiary in Washington, D. C. In this capacity he was in charge of government contracts and management of branch office sales operations.

Prior to his SoundScriber career Mr. Drake was with International Business Machines Corporation in managerial capacities in Indianapolis, Detroit, and Rochester, New York.

★ ★ ★

ONE OF THE WEAKNESSES of business executives is the quality of their dictation, it was disclosed at the National Business Show. Only ten percent of the 549 executives who volunteered to have their dictation rated by experts at the show were classed as excellent, The Gray Manufacturing Company reported.

"How Do You Rate With Your Secretary As A Dictator" was the theme of the display established by Gray to give visitors to the Show an opportunity to discover how their dictation sounds to their secretaries.

The display, in the form of a contest offering a Gray Audograph V combination dictation-transcription unit as a prize, invited visitors to dictate a standard paragraph into an Audograph. The judges were secretaries of a leading secretarial service organization. The judges found that 63 percent of the total were classed as poor dictators — mumblers, growlers, and slurrers. Twenty-seven percent qualified as "good" but the combined total of those rated "excellent" and "good" did not begin to equal the total declared "poor" in dictation habits.

★ ★ ★

PROBLEMS of cost, studio space limitations, and remote telecast coverage may be solved for both small and large TV stations by a new motor-driven zoom lens recently developed by The Perkin-Elmer Corporation, Norwalk.

Called "Auto-zoom, the new lens is the first one especially designed for use with 16mm TV cameras and the Vidicon tube. It is said to provide for the first time optical equipment equal or superior to that in use on larger image orthicon cameras.

In addition to commerical television, the new lens will also find wide use in industrial and non-commercial applications such highway traffic control, hazard area and freight yard observation, horse race monitoring, military battlefield observation, and plant production line observation.

SMITH FAMILY of Cartons display shears vertically and in plastafol.

SEYMOUR SMITH & SONS, INC., of Oakville, is packaging two types of its pruning shears in novel cartons that use a minimum amount of space by displaying the shears vertically, and a third type of shears in a Plastafol covered carton, produced by the Thames River Division of Robert Gair Company, Inc., manufacturers of paperboard and paper products.

The printed design, created by Seymour Smith, uses colors and the company's logotype to carry through the family resemblance in each carton. The two display cartons feature drawings of grass and flowers with copy describing the type of shears.

★ ★ ★

BUSINESS FORMS, INC., of West Hartford, recently celebrated the 20th anniversary of its founding. The company specializes in the design and manufacture by offset and letterpress of forms used in business, such as statements, ledger cards, invoices, letterheads and general factory and office forms.

Founded and still headed by F. Cheyney Beekley, Business Forms, Inc. now occupies 15,000 square feet of floor space and employs 30 people in its modern plant.

The company was recently appointed exclusive distributors for Magne-Dex Visible Files, and in addition has formed a subsidiary company, the Newmatic Corporation, equipped with

a complete mechanical laboratory, specializing in electrical and mechanical production designs.

★ ★ ★

PRESIDENT JOHN A. COE, JR. of the American Brass Co. recently announced that James F. Ackerman, vice president of the Torrington Division, will serve as vice president of the American Brass Company.

Named vice presidents were William C. Knoeppel, who has been serving as manager at Torrington and will succeed Mr. Ackerman there, Frank H. Ballentyne, vice president, French Small Tube Division, Waterbury, succeeding Leon H. French, who retired recently after 51 years of service, and Scott H. Patterson, vice president in charge of the Buffalo Division.

★ ★ ★

THE MERGER of The Neptune Meter Company and Eastern Industries, Inc., has recently been announced.

Eastern Industries, which has plants in Hamden and East Norwalk, Conn., and Newton, Massachusetts, was founded in 1946 by Eugene D. Stirlen, president and chairman of the board. The company manufactures radar speed meters and produces 80 percent of vehicle actuated traffic controls.

Neptune, the world's largest manufacturer of liquid meters, last year acquired Revere Corporation of America, manufacturer of precision instruments for aviation and industry, in plants in Meriden and Wallingford.

★ ★ ★

CONTINUING steady growth has caused the MB Manufacturing Co., New Haven, to undertake a major plant expansion and personnel recruitment program, it has been announced.

The firm, a subsidiary of Textron, Inc., has announced plans to add 66,000 square feet of floor space to what has been a branch plant at Whalley Ave. and Fitch Street. In addition, MB plans to add 200 employees to its present work force of 550 persons.

MB is said to be the only firm in the United States which covers the entire range of vibration control. It produces vibration equipment for military and civilian planes and ships, guided missiles and other defense weapons, passenger cars, trucks, tractors, air-conditioning units, industrial machinery, building construction and other civilian uses.

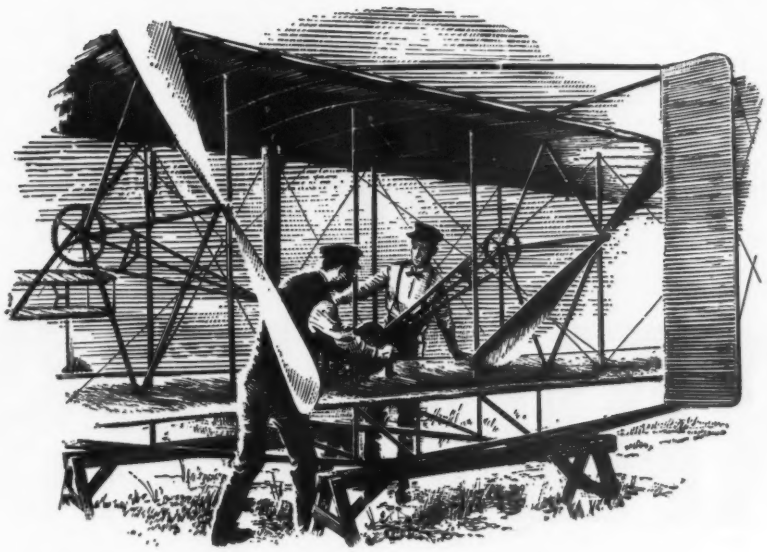
★ ★ ★

TWO CHANGES among the officers of the Locke Steel Chain Company, Bridgeport, have been announced by the company.

Montgomery Mason was elected vice president of the firm and was appointed general sales manager. He succeeds Sylvanus D. Locke, who has retired.

FOUR MEN—190 YEARS SERVICE. Seated above are four men whose combined service to the Bristol plant of New Departure Division, General Motors Corporation, covers a period of 190 years. Left to right, Carl G. Anderson, 47 years; Joseph H. Chagnon, 45 years; William N. Johnson, 47 years; and Wilbur C. Hawxhurst, 51 years. The latter two are now retired. Shown standing in the picture with the Old Timers are ND executives, left to right, Robert H. Wilkie, Bristol plant manager, Paul W. Rhame, general manager, and Seth H. Stoner, its general works manager.

Connecticut Highlights from the story of the PRATT & WHITNEY COMPANY

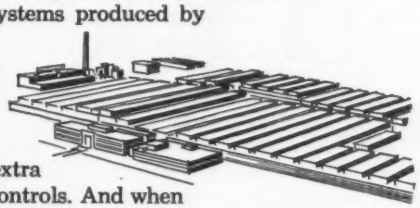


From THEIR 12 Seconds . . .

to YOUR Unlimited Horizons

Powered by a primitive, 12-horsepower engine, the Wright Brothers' flimsy biplane stayed aloft just 12 seconds on the historic flight that started man's conquest of the air.

Today — thanks in large measure to engines made powerful and dependable by Fuel Control Systems produced by our **CHANDLER-EVANS DIVISION** — the continent can be crossed in hours. Your airliner flies safely in all weather with non-icing carburetors pioneered by **"CECO."** Military jets guarding our nation owe their extra k.o. punch to **"CECO"** Afterburner Controls. And when man finally spans outer space, **"CECO"** Controls will be there too.



MACHINE TOOLS • CUTTING TOOLS • GAGES

PRATT & WHITNEY COMPANY
INCORPORATED
WEST HARTFORD, CONNECTICUT

SINCE 1860 . . . AMERICA'S FIRST CHOICE FOR ACCURACY

John K. Lockwood, treasurer, assumes the office of secretary, held formerly by Mr. Mason.

★ ★ ★

THE SAFETY CAR HEATING & LIGHTING COMPANY, INC., Hamden, has announced that it has contracted to purchase from an investment group the tangible assets of The Howe Scale Company, located in Rutland, Vermont.

H. F. Kneen, president of The Safety Company, stated that Howe Scale Company will continue its operations in Rutland as a wholly owned subsidiary of the Hamden firm. Mr. Kneen, in addition to his duties as president of Safety Car Heating & Lighting Company, will become president and chief executive officer of Howe Scale, and Frank G. Riehl, formerly president, will become chairman of the board. John G. Fenton, formerly Howe manufacturing vice president, will be executive vice president.

Howe Scale Co. began operations in 1857 and its present employment is approximately 900. It first conceived the idea of supporting the scale platform on metal balls and this invention was the foundation of the company's business.

★ ★ ★

THE ELECTION of James R. Kerr as vice president of Avco Manufacturing Corporation was announced recently by Victor Emanuel, chairman and president.

Mr. Kerr, who joined the company in November 1954, is director of Avco's West Coast division and assistant general manager of the advanced development division in Stratford, where he will make his new headquarters.

★ ★ ★

SAMUEL I. LYONS, retiring general sales manager of the Mill Supply Division of The Bristol Co., Waterbury, was guest of honor recently at a testimonial dinner. He had been with the company for 49 years.

Also honored was Roy M. Walker, sales engineer, who retired from the company after 40 years of service.

★ ★ ★

THOMAS BALL, JR., president of Revere Corporation of America, has announced the election of Walter E. Lucie to the office of assistant treasurer of the corporation.

Mr. Lucie joined Revere in August

IN A DISPLAY BOOTH in the main lobby of the Commerce Building, Washington, D.C., The Bullard Company featured its Model 75 Man-Au-Trol unit and a stanchion mounted pendant control for use on its Vertical Turret Lathes. Shown at the display are, left to right, Hon. Robert C. Watson, Commissioner of Patents; Hon. Walter Williams, Under Secretary of Commerce; H. Edward Neale, Sales Manager of The Bullard Company, and Paul M. Geist, Patent Counsel for the company, at the formal opening of the display.

1954 as controller, having been formerly associated with Price, Waterhouse and Company since 1951 in the position of senior accountant.

★ ★ ★

APPOINTMENT of A. L. Armantrout as vice president of industrial relations for the Lycoming division of Avco Manufacturing Corporation, Stratford, was announced recently by S. B. Withington, president and general manager.

Mr. Armantrout fills the vacancy created by the recent promotion of James E. Mitchell as Avco director of personnel relations with headquarters in New York city. He is a graduate of Purdue University, and spent ten years with Carnegie Illinois Steel Corporation in engineering and industrial relations positions prior to enlisting in the Navy during World War II.

Following three years of military duty, Mr. Armantrout was associated with U. S. Steel Corporation, Anheuser Busch Co., Bridgeport Brass Co. and for the past three years has been with Daystrom Institute, Archbald, Pa.

★ ★ ★

THE BOARD OF DIRECTORS of Cuno Engineering Corporation, Meriden, has announced the election of D. Warren Brooks, a certified public accountant, to the office of assistant treasurer of the company.

Mr. Brooks joined Cuno on January 1, 1954 as chief accountant after having been affiliated with the company in an auditing capacity for a ten-year period with the accounting firm of Kircaldie, Randall & McNab.

★ ★ ★

SPENCER M. BERGER has been named president of the Berger Brothers Co., of New Haven, to succeed George W. Berger, one of the firm's founders, who was elected to the newly created post of chairman of the board of directors of the company.

The new president is the son of D. Spencer Berger, whose talent for design was an integral part of the foundation of the 51-year-old organization which today serves England, Canada and the United States.

Spencer M. Berger has been associated with Berger Brothers since 1937 and three years ago was made executive vice president of its sales subsidiary, Spencer, Incorporated. He will retain that position, with Fred W. Loeser con-

tinuing as vice president in charge of that company's home office activities.

Robert Brown, formerly controller of Berger Brothers, was named vice president and treasurer. He joined the company's accounting department in 1930 and in 1954 was made head of its government contracts unit.

Also made a vice president, and plant manager in addition, is James J. Sullivan, who started with the company in its shipping department in 1924.

★ ★ ★

"DESIGNING FOR PEOPLE" is a new book, written by Henry Dreyfuss, one of the nation's foremost industrial designers, which is said to be heading for the best seller lists.

In its are included many of the products of the E. Ingraham Company, Bristol, and the story behind the design and manufacture of them. Mr. Dreyfuss was first retained by E. Ingraham Company six years ago.

Part autobiography, part a revelation of his own industrial design methods, and part a story of American mass production methods, the book was published by Simon and Schuster, of New York. The products of E. Ingraham Company are mentioned in both text and in 32 pages of illustrations.

Mr. Dreyfuss, now rounding out his 26th year in his profession, has just been given a Neiman-Marcus award for his outstanding work during the past 25 years, including authorship of the book.

★ ★ ★

JACQUES WIMPFHEIMER, president of The American Velvet Co., Stonington, has announced that company employees received profit sharing equivalent to 15.45 per cent of their earnings for the year ending November 30.

This is the 16th consecutive annual distribution that the company has made since the profit sharing system was started. Mr. Wimpfheimer stated that the profit sharing plan was revised in 1947 by the institution of a retirement fund. Since then one-third of each worker's share has been paid into this fund to the individual worker's account, and two-thirds have been paid to the worker in cash.

★ ★ ★

HERMAN W. STEINKRAUS, president of the Bridgeport Brass Com-

pany, Bridgeport, has recently been named Connecticut state chairman of the 1956 Crusade for Freedom.

Mr. Steinkraus will organize Crusade committees throughout the state to raise funds for Radio Free Europe and Free Europe Press.

In a statement at the time of his appointment, Mr. Steinkraus said, "The Communists continue to enslave the peoples of eastern and central Europe. Through the operations of Radio Free Europe and Free Europe Press, we are exposing the lies of the Soviet propaganda machine and supporting the efforts of captive people to regain their freedom."

★ ★ ★

AMERICAN INDUSTRY is "betting literally millions and billions of dollars" in new plant and equipment that our economy is going on to new plateaus of prosperity.

This forecast for 1956 and the years to come was made by Henry G. Riter, 3rd, as he retired as the 1955 president of the National Association of Manufacturers.

Mr. Riter has been succeeded in NAM's presidency by Cola G. Parker, retired board chairman of the Kimberly-Clark Corporation, Neenah, Wisconsin.

During 1955 Mr. Riter traveled the length and breadth of the United States, and his statement was based upon personal observations and talks with leaders in all fields of business and industry.

Commenting on the "millions and billions of dollars" which industry will be putting into new plant and equipment "so people may prosper," Mr. Riter said: "This is far different from the talk of those who spell prosperity in terms of big government spending, 'give-away' programs and government-made security. Our unparalleled national prosperity—with more than 65 and a half million Americans gainfully employed—is a tribute to private enterprise."

★ ★ ★

NEW BULLETINS published by Revere Corporation of America, Wallingford, are now available for distribution. The bulletins, 1601, 2, 3 and 4, totaling 14 pages, cover design and selection of thermocouples for liquid, gas and surface temperature measurements. They contain outline drawings of standard units, information on conductors, junctions, tubes and other engineering data.

★ ★ ★

THE APPOINTMENT of Edward J. Ferris to be general superintendent of the Machine Tool Division of Pratt & Whitney Company, Inc., West Hartford, has been announced by A. H. d'Arcambal, president.

Mr. Ferris succeeds A. L. Knapp, who was recently named vice president of the company and manager of its Machine Tool Division.

New Products: Why Needed

(Continued from page 18)

cost you 40 cents. For a novel approach to the idea problem, see R. N. Galvin's IDEAS—BY THE HUNDREDS, which appeared in the December 1955 issue of *Dun's Review and Modern Industry*. For a description of the way that some of the larger corporations tackle the problem see NEW PRODUCT DEVELOPMENT, *National Industrial Conference Board*—Studies in Business Policy, No. 40.

HOW WOULD YOU DECIDE?

In this department each month there will be published labor relations grievances that were settled by arbitration. Read the grievances and check your opinion against the arbitrators ruling. Selection of cases made by MAC counsel.

Does a 30% increase in production resulting from redesigning a machine require an adjustment of wage rate?

Here's what happened.

The Engineering Department redesigned and reconstructed one of two machines on which the operator was working from a rocking-bed method in which the material moved into the wheel to a wheel-slide method in which the wheel moves into the material. After an experimental period in which a few adjustments were made the operator was instructed on the new operation. With very little added experience on the redesigned machine the operator increased his production by 30%. At the request of the union the company re-evaluated the job and found no significant change in any of the job factors which would warrant a change in the job grade. Although the duties had been re-arranged the survey indicated the operator had almost 5% more free time on the new machine. In view of the facts, the union's claim boiled down to the proposition that a 30% increase in production certainly should be reflected in an adjustment of the wage rate.

How would you resolve this question? Here's what the arbitration board decided.

The arbitration board decided that since the agreement between the parties provided that the rate structure is geared to a job evaluation plan and not to production, it would be necessary for the union to establish its claim by establishing that the job factors in the job evaluation plan negotiated by the parties had been changed sufficiently to warrant an increase or increase in the point of value of these factors necessitating a change in the job level and rate. Since the only factor which appeared to have been increased was the Experience Factor and since even that called for not more than an additional six months experience, it was not sufficient to add the necessary point values required to change the labor grade of the job. Consequently, no change in rate was called for even though production had been substantially increased.

Must the tool crib attendant be called in for work when production work is to be performed, regardless of the amount of that work which is to be performed?

Here's what happened.

Ordinarily the tool crib attendant services a number of departments, in all of which about 140 employees are regularly employed. On four different Saturdays about nine or eleven assembly department employees worked, and the tool crib attendant was not called into work. On each of those Saturdays the foreman unlocked the tool crib door and permitted employees to get tools. This occurred at least twice on each of the Saturdays and not more than eight times on any of the days involved. The union claimed that under a contract clause prohibiting a supervisor from performing production work, the tool crib attendant should have been called in on those Saturdays and was entitled to be paid for the time lost.

How would you decide this issue? Here's what the arbitration board decided.

The arbitration board pointed out that although it could not lay down a yardstick against which actions can be measured for compliance or non-compliance with this provision of the contract, nevertheless, the work involved on the four Saturdays in question amounted to no more than a few minutes out of an eight hour period and consequently, the union should not reasonably insist that a crib attendant be kept on duty to cover that amount of use of the crib.

Must the company comply with

an agreed ratio of service boys although technological improvements reduce the number of service boys needed?

Here's what happened.

About eight years before the date of the grievance, the company and the union negotiated a written side agreement setting forth prescribed ratios of service boys to certain looms of particular sizes and types. Although this agreement had been extended by successive contract negotiations and was still in effect, the company had been employing a smaller number of service boys than required by the agreement. The company claimed technological improvements had decreased the number of boys needed and further claimed it had been providing a staff of boys sufficient to adequately service the weavers. The union relied on the clear language of the agreement and requested the company to pay the boys presently employed the amount of wages which the company had saved by having violated the agreement.

In your opinion was the company justified in reducing the number of boys by reason of the technological improvements? Here's how the arbitrator resolved the issue.

In view of the clear and specific requirements of the side agreement, the arbitrator felt he was without authority to legislate a revision but must enforce the agreement as it now stands. He was of the opinion that the manpower requirements for the service boy classification as set forth in the side agreement are now excessive and should be revised downward and he recommended that the parties review the subject and negotiate a more realistic set of ratios. Nevertheless, he did feel bound by the side agreement and declared that an amount equal to one half the wages saved by the company since the date of the filing of the grievance, as a result of the understaffing, was the proper amount to be distributed to the service boys then employed in the department.

Revere Research Brings A New Company to Conn.

(Continued from page 11)

creasing highway safety and highway longevity.

New England's first electronic highway scale has been recently completed on Route 5 in Wallingford. This installation has been built by the Connecticut Department of Highways as a cooperative research project with Revere Corporation of America. The data obtained from the equipment is expected to be of assistance both in future highway planning and in exploring new fields for electronic weighing.

These installations consist of a narrow level platform located in the traffic lane, just wide enough to carry the wheels of a truck's axles. As a truck speeds over the scale, electronic weighing cells which support the platform instantly transmit data to a remotely located indicator where it is automatically recorded for future study and analysis.

The Cox and Stevens "overload detector", an electronic system which senses whether trucks have axle loadings in excess of the state's legal limits, allows highway officials to enforce state weighing laws without interfering with the normal highway speed of most trucks. Only those that are overloaded or are approaching legal weight limits are halted for reweighing.

New Wallingford Plant Addition

A 22,000 square foot annex to Revere's Wallingford plant has been required to meet the expansion of the company's production lines. A portion of the recently completed addition is being used to house the facilities of the enlarged research and development laboratory. This laboratory, under the direction of D. H. MacDonald, contains a variety of precision equipment and testing machinery used in pressure, temperature, humidity, liquid level and liquid flow studies. Air conditioned areas and specialized equipment, designed and built where available commerical units are found to be unsuitable, help to make possible a continued search for new techniques, new insights, and for new command of the basic principals behind Revere products. A Cox and Stevens electronic platform scale is an integral part of the laboratory.

A subsidiary of the Neptune Meter Company of New York, the world's largest manufacturer of water meters, Revere has perfected a line of aviation instruments that are used in today's most modern planes and aircraft power plants. Five Revere products are in North American's F-100 Super Saber which established a new official world's speed record in September, 1955.

Moscow's Primary Target is U. S. Business

"Communist world domination," Lenin once said, "is impossible without the violent destruction of the machinery of the capitalistic state."

Lenin's eyes, even then, were on the United States. What he meant was that so long as the resources and production of America were strong the free world would remain too tough to gobble up.

Our industrial and business institutions, small and large, are the hard core of our "capitalistic state" so hateful to the Communists. Hence, the Kremlin works day and night within our borders to put us out of business. Depression within the U.S. is the eternal mission of Moscow . . .

> **By advocating ruinous taxes upon business; by infiltrating unions and fostering costly strikes; by supporting legislation to throttle fresh investment and industrial expansion; by creating frictions and distrust between business and the public.**

The Communist organs within our midst establish the platform and tell the story week by week for all to read and ponder.

The Gray Manufacturing Company believes it has an obligation to freedom, to America, and *to its own stockholders and employees,* to expose and combat the conspiracy that would destroy the foundations upon which the company stands. Among other things it uses part of its advertising budget for this purpose. *We believe it's good business.*

Gray is proud that this campaign earned the Patriotic Advertising Award of the Sons of the American Revolution. The citation reads in part:

> **"In recognition of its outstanding series of institutional advertisements dedicated to the protection of our American way of life against the threats of Communist subversion and to the preservation of liberty, justice and private initiative which has given us the highest standard of living and the greatest individual freedom this earth has ever known."**

And J. Edgar Hoover, Director of the Federal Bureau of Investigation, has commended the Gray Company as follows:

> **"American industry can render a great service in helping fight Communism. Through their advertising media, timely messages can bring home to the American people the many evils of Communism . . . I feel that your efforts in pointing out the threat of Communism are a most praiseworthy public service."**

Reprints of these public service advertisements, exposing the Communist conspiracy, are available on request. Write to: The Gray Manufacturing Company, Hartford 1, Connecticut.

The GRAY Manufacturing Company, Hartford 1, Conn.

Audograph and PhonAudograph "Pushbutton Dictation" Equipment

and Gray Research & Development Co., Inc., Specialists in Video, Audio and Electro-mechanical Devices

TRANSPORTATION

By EDWARD M. MAMULSKI

Traffic Manager

Rail Classification Redefined by I.C.C.

By an order which became effective on January 1, 1956, the Interstate Commerce Commission placed all railroads and switching and terminal companies in two general classes; namely, Class I and Class II. All rail carriers whose operating revenues average three million dollars or more each year, over a three year period, will be grouped in Class I, while all the other rail carriers will be grouped in Class II.

In the past, railroads and switching and terminal companies were divided into three classes. Rail carriers with annual operating revenues of one million dollars or more, were grouped in Class I; carriers with yearly revenues of one hundred thousand dollars but not exceeding one million dollars a year, were grouped in Class II; while all the other rail carriers were grouped in Class III.

The Commission's new order will eliminate Class III and reduce the number of rail carriers now in Class I from 129 to 126.

Southern Democrat Named to I.C.C.

President Eisenhower nominated Rupert L. Murphy to serve as I.C.C. Commissioner. Mr. Murphy received a recess appointment and will complete the unexpired term of Hugh W. Cross who recently resigned from the Commission. The term ends December 21, 1957. This appointment is subject to Senate approval. Mr. Murphy is 46 years old, a Democrat and an Atlanta attorney. He formerly represented the American Cotton Manufacturers Institute, and was traffic manager and attorney for the Georgia-Alabama Textile Traffic Association.

Pan Atlantic Plans to Build Seven Trailerships

It is reported that Pan Atlantic Steamship Corporation and the Maritime Administration have reached an agreement which is subject to the U. S. General Accounting Office's concurrence, which will permit Pan Atlantic to classify seven war-built C-2 type cargo ships as "obsolete" and "trade in" these ships to the Government. With the proceeds of this transaction, Pan Atlantic plans to build seven new roll-on-roll-off ships which it contemplates using in intercoastal trade between Atlantic and Gulf Coast port cities. The estimated cost of each trailership is nine million dollars. The new vessels will be capable of carrying 268 twenty-ton trailers and 20 trailers of 35 ton capacity. These ships will also be designed to accommodate certain types of military vehicles, and permit the operators to unload the entire cargo in about four to six hours as opposed to at least 2½ days time required for conventional unloading methods.

Pan Atlantic plans to institute a regular roll-on-roll-off, door-to-door, freight service, through the following ports: Boston, New York, Philadelphia, Baltimore, Charleston, Jacksonville, Miami, Tampa, Mobile, New Orelans, Houston, Galveston and other port cities on the Atlantic and Gulf Coast.

SPOTLIGHT ON THE FUTURE*

By CHESTER F. OGDEN
Manager of Purchases
Detroit Edison Company
Detroit, Michigan

General Business Conditions

PURCHASING executives, reporting in the January Survey of industrial business conditions, note a leveling off in production, for the first time in several months. While 54% (same as in December) reported production unchanged, it may be significant that the number who report production to be better dropped to 33% (from 40% in December), and there was an increase to 13% (from 6% in December) who reported lowered output. In most cases, reduced production was reportedly reflected in a return to a standard work week, with overtime either eliminated or substantially reduced.

The pattern of new orders remained essentially unchanged, according to the January reports. Increased orders were reported by 34%, compared with 35% in December; and 48% reported their order books unchanged. 18% of those reporting, as against 16% in December, state new orders have decreased.

Prices continue to advance and items in short supply are more numerous and of greater variety. Employment remains steady. Buying policy shows some restriction, as it is geared to forward planning to meet production requirements.

Of the members who responded to a special question, 52% say capital expenditures will be higher in 1956 than in 1955; 33% report they will be about the same, and 15% say less will be spent. To pin-point their expectations for capital expenditures, 57% report the program calls for expansion of production facilities, and 43% say the expenditures will be for modernization.

Commodity Prices

That prices are continuing the upward trend is reflected by 63% who reported price advances, 6% more than in December. 37% reported prices the same, 3% fewer than a month ago, and not one reported a downward trend of prices.

Inventories

In reporting on purchased materials inventories, the number who say they are higher - than - a - month - ago was fewer, 23% compared with 28% in December, and indicated their stocks reflect a continued combination of short supply of raw materials and steady demand. 60% reported inventories the same as in December, and the 17% who reported having lower stocks generally attributed this to tax situations and shortages of critical items. In December, 57% reported inventories to be unchanged, and 15% reported them to be lower-than-the-month-before.

Employment

Little change is reported from December. While the number reporting employment the same showed little change, from 70% in December to 71% in January, there is a slight drop, from 25% to 21%, in the reports indicating employment as greater.

Buying Policy

There is some shrinkage indicated in purchasing policy, although the January reports of purchasing executives show the majority continuing to buy plentifully. For production materials, there were 44% reporting in the 90 days plus category and only 3% on a hand-to-mouth basis; in December figures for the same categories were 50% and 4%, respectively. In January, reports show 24% in the 30-day bracket and 29% planning for 60 days; in December, those percentages were 16% and 30%, respectively. On MRO supplies, 18% report hand-to-mouth; 36% say 30 days; 28% plan 60 days, with 18% in the 90 days plus category. On capital goods, 77% report 90 days or better, as their buying policy.

Specific Commodity Changes

Advances in prices and items in short supply are more in evidence in January.

On the up side are: Steel, zinc, lead, titanium dioxide, paper, fuel oil and cement.

On the down side: Vinyl resins, and rubber.

In short supply: Aluminum, brass, copper, nickel, steel (plates, sheets, stainless, structural and many steel products) steel scrap, selenium, titanium dioxide, paper, cellophane, ball bearings, cement and glass.

* *Composite opinion of purchasing agents who comprise the N.A.P.A. Business Survey Committee, whose Chairman is Chester F. Ogden, Manager of Purchases, The Detroit Edison Company, Detroit, Michigan.*

BUSINESS TIPS

from

School of Business Administration

University of Connecticut

Automation: Some Appraisals

By ZENON S. MALINOWSKI, *Assistant Professor Marketing*
School of Business Administration
University of Connecticut

Merely an Extension of Normal Technological Progress?

THE introduction of new and better machines and methods in manufacturing, in the expanding service industries, and in agriculture has been going on for generations. According to studies by the National Bureau of Economic Research, there has been a surprisingly steady rate of increase in the productivity of the U. S. economy of approximately 2 percent a year for the period 1909-1950. When this knowledge is associated with the battle of men against machines in the industrial revolution of a century and a half ago, with the cult of technocracy in the period between the two World Wars, and with the same hue and cry over "machines putting people out of jobs" in Congressional hearings in 1940 and during the depressed '30's, it is no wonder that we ask ourselves whether automation is not merely an extension of our normal technological progress.

Electronic Wonderland: A Second Industrial Revolution

On any given shift, four men and a supervisor operate an entire 10,000 square-foot chemical plant that turns out 650,000 pounds of napalm a month. At U. S. Industries, Inc., 155-mm shells are automatically processed through stations full of blinking lights and clicking relays that are attended by only one or two men. An engine block that once took nine hours to complete at the Ford Motor Company is now sped through some five hundred operations (each automatically checked and inspected) in fifteen minutes by an electronic brain fed by twenty-seven miles of wire and forty-two mechanical hands in the form of automatic machine units. Prudential expects its electronic computer to replace sixty to seventy-five other machines along with their operators. A Ratheon Manufacturing Company chassis-assembly line that turns out 1,000 radios a day is now operated by only two employees; it would formerly have required two hundred. In twelve machine-hours, the IBM 702 Electronic Data Processing Machine will do 1,200 cost reports that normally took 1,800 man-hours.

The many existing applications of automation of which these are but a few examples give some indication of the probable wonderland of the world to come. These changes do not seem to be mere extensions of our normal technological progress; they seem rather to presage a sweeping change in our whole economy. Although automation, of course, has its roots in mechanization, something new has definitely been added in the application of the feedback principle through electronic devices. At the operations level, this automatic control device actually substitutes machinery for the human brain. The new automated equipment can process raw materials, adjust to variable productive conditions, correct its own mistakes, reject or rework parts, change its own parts, assemble parts to make a finished product, inspect the final product and package and load it into freight cars—all without direct human help, after initial instruction of the electronic brain through a punch card or a recording tape.

Management's and Labor's Appraisals

In October of 1955, a Congressional Subcommittee on Economic Stabilization heard and studied statements on automation and technological change made by some very distinguished business executives, labor officials, economists, and engineers, all selected because of their close contact with the subject. These hearings, now available through the Superintendent of Documents, U. S. Government Printing Office, undoubtedly constitute today's most complete and probably best appraisal of automation and of its implications for the future.

The preponderant attitude of the testifying business executives was that automation is but the latest phase of a now old story: mechanization. They expressed confidence that just as in the past, mechanization will create more jobs than it destroys and the necessary price and investment adjustments will follow in time through the automatic functioning of a free-enterprise economy. Several business executives recognized but did not stress that there would be displacement and dislocation of labor creating local hardships that would require the attention of both labor and management.

The primary reaction of labor-union officials to automation was concern for the welfare of their charges in the years immediately ahead. They recognized the benefits that could ensue in the form of shorter working hours, longer vacation periods, opportunities for earlier retirement, and higher standards of living, but stressed the severe short-run dislocations and local burdens and losses which had already occurred, they claimed, in a few instances and which, they predicted, would occur with greater severity in the immediate future. The representatives of labor stressed the joint responsibility of labor, business, and government to make plans for a smooth transition and the necessity of labor to continue its demands for a share in the increased productivity.

The Economist's Appraisal

It has become axiomatic in economic theory that technological change does not result in chronic unemployment but creates new industries and additional jobs, and it now is probably almost as generally recognized that transitional problems and costs—such as the loss of income and the loss of rights accumulated on the old job, which in many individual cases result in human suffering—do occur when the change is rapid and do require humane consideration by labor, management, or government.

While this axiom of job creation is easily spouted by even first-semester students of economics, some professional economists have expressed concern while others have simply claimed ignorance about the degree to which this job creation will progress in this particular instance. For example, Professors Walter S. Buckingham and Sherman F. Dallas expressed skepticism about new and especially about rapid job creation before the Southern Economic Association, while Professors George B. Baldwin and George P. Schultz claimed ignorance about job creation before the Industrial Relations

Research Association. If those who do not see the same promise of secondary investment that followed earlier developments in technology are correct, the transitional problems may be very serious indeed and very longlasting, and reasonable adjustment may not prevail until finally a new leisure demands increased services in the form of entertainment, travel, cultural activities, adult education, etc., on an entirely new scale.

This very important question mark with its vital repercussions on our economic welfare over the next several years is surrounded by some other interdependent imponderables that certainly impinge on this major question and on our adjustment to automation. How fast will automation progress? How far will displacement and dislocation go? What effect will or could such social shock absorbers as the guaranteed annual wage, severance pay, unemployment benefits, careful timing of labor-saving innovations, cooperative labor, business, and government retraining programs have on the welfare of the economy during the transition period and in the "completed" stage of automation? What effect will alternate tax policies have on extent and timing of the trend to automation?

Disciples of automation should be particularly interested in the attempt of Dr. Edwin C. Nourse, former Chairman of the Council of Economic Advisers, to make an analogy between automation in industry and the functioning of our national economy. Continuous process and rationalization are two important principles in automation. In industry, these principles refer respectively to the regulation of a constant flow of goods and to the care ful analysis of the entire process (from raw material to final product) so that every operation can be designed to contribute most efficiently toward achieving the established goals of the enterprise. To this "continuous process" of physical production in an automated factory, Nourse likens the continuous flow of money relations through our whole economy. In his own words, "the operational flow of our modern industrial system is not merely a matter of the physical movement of material objects. . . . It involves also the flow of price-and-income relationships that furnish purchasing power to consumers —individuals, business concerns, and Government procurement agencies—as well as capital formation out of profits and savings, and finally incentives to enterprisers and to workers of all grades to prepare themselves for and apply themselves to the kinds of activity that the character of our technology makes possible and requires." Interestingly enough, if one pursues the similarity he can find analogous automatic control devices in unemployment compensation and the regulatory powers of the Federal Reserve Board, for example.

The important but unanswered questions that I have just raised are evidence of our ignorance of the components of this operational flow and their functional relationships. Even in periods of more normal technological progress, business men, labor unions, and the Government are continuously instructing this continuous-process money mechanism by raising prices, demanding higher wages, and altering taxes without quite understanding how these instructions will affect the entire process. Is this perhaps like allowing the janitor in the new automated factory to set the tape instructing the electronic brain?

There is great hope that the new electronic computers will permit us to process vast arrays of data in order to study and interpret the operations of our economy under different proposals.

BUSINESS PATTERN

A comprehensive summary of the ups and downs of industrial activity in Connecticut for the thirty day period ending on the 15th day of the second previous month.

THE Connecticut index of general business activity stood at an estimated 18 per cent above normal in November, a two percentage point improvement over October. This is the third successive monthly rise during which time the index has gained 7 points. The rises of September and October largely reflected recovery in the flooded areas whereas the November up appears to be more widespread.

In November the United States industrial activity index rose one percentage point to an estimated 15% above normal. Production of metals and electric power contributed most strongly to the advance.

New Plant and Equipment

Business outlays for new plant and equipment in the United States increased rapidly during the second and third quarters after declining steadily for a year and a half. The sharpness of the rise is reflected in the fact that during these six months the ground lost during the previous six quarters was more than recovered.

Expenditures during the third quarter of 1955, at an annual rate of slightly over $29 billion, exceeded the previous high recorded two years ago.

Confidence that the level of business will continue at a lofty pace is the primary reason for this recent increase in capital expenditures. Preliminary estimates suggest that even greater outlays can be expected in the period ahead.

Unemployment Claims

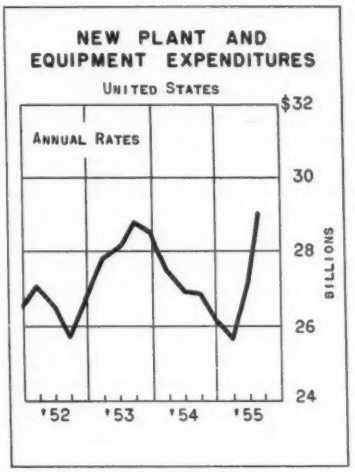
During the week ending December 17 claims on file for unemployment compensation in Connecticut stood at 15,300. At the same time last year claims totaled 29,600.

Also reflecting the improved business climate is the relatively low level of initial claims. These stood at 2,900 compared to 4,900 last year.

Employment

Declining manufacturing employment in Connecticut during the inventory recession of 1953-54 resulted in more workers engaged in non-manufacturing than in manufacturing occupations. This trend has reversed itself in 1955 with manufacturing accounting for the larger gain as non-agricultural employment rose steadily. This was especially true during the past four months in which time manufacturing increased 19,500 employees compared to 9,600 by non-manufacturing.

New plants and plant expansions, recently announced, will provide further manufacturing jobs for Connecticut labor. The largest are a $60 million factory expansion in Hartford and a $30 million atomic research development near Middletown. Several others valued at $1 to $10 million have also been announced.

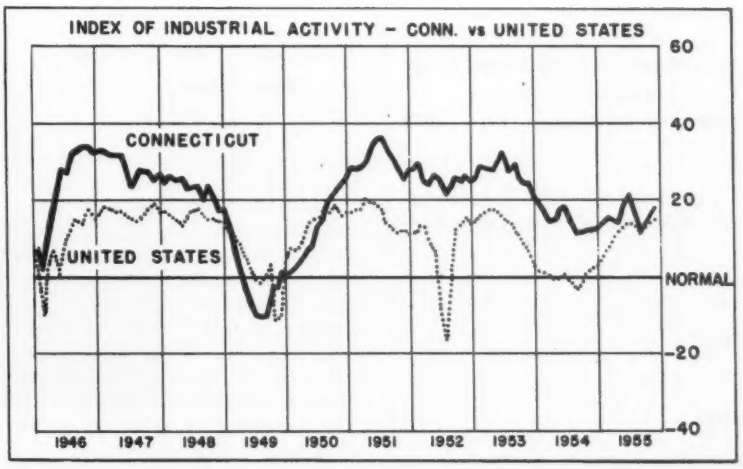


Wages vs. Cost of Living

Wages received by factory workers in Connecticut have increased sharply, especially during the past three months. The cost of living, as measured by the consumer price index, meanwhile, has varied only little and at present is approximately the same as it was in January 1954. During this period total wages and basic wages increased 14 and 5 per cent, respectively.

Automobiles

The automobile industry, which has been a pace setter in the 1955 prosperity, started again with a lofty production level following the model change-over period. Sales in recent weeks, however, although good, have not been able to keep pace with the optimistic production schedules. As a result inventories are now somewhat higher and it remains to be seen whether automobile sales can match the 1955 record.



Expansion At Sikorsky

(Continued from page 13)

Combined work space in the Bridgeport and Stratford plants totals more than 1,500,000 square feet.

The new factory contains 800,000 square feet of floor space, 630,000 devoted to manufacturing. The remaining area is used for office spaces. Engineering and service departments remain in the Bridgeport facility.

Private homes lying close to the Stratford plant were purchased by the company and have been retained in their original state. Landscaping plans were designed to maintain the surrounding residential atmosphere.

Flight facilities in Stratford include an extensive flight field, hangar, pilots' office and ready room. Quarters for fire protection personnel and equipment are located in the hangar.

Parking space for more than 2,000 employees' cars is located west of the plant building, with visitors' parking available in front of the main entrance.

Test stands, paint storage, power generating and sewage disposal equipment are all located outside.

Manufacture of component parts of the S-56 was begun in Stratford last April, with limited assembly production of the S-55 and S-56 starting in early summer. The first S-56 production model was finished and flown prior to the plant dedication on October 26, 1955.

Designed by the Detroit firm of Fairbrother and Miehls, with Albert Kahn Associated Architects and Engineers as consultants, the plant was built by Bridgeport's E. and F. Construction Co., general contractors. The D'Darrio Construction Co., of Bridgeport, handled the site clearance work.

Accurate Brass Occupies New Home In Bristol

(Continued from page 12)

gear parts, and forgings for machine parts such as ball bearing retainers.

Directing the operations of Accurate under President O'Brien are: Otto E. von Au, former president of Accurate and now a consultant; Philip A. Coleman, former assistant general sales manager of Bristol Brass, vice president; Frederick W. Beach, secretary and John B. Breckenridge, assistant secretary and assistant treasurer.

In a message to employees of Bristol Brass, Mr. O'Brien said:

"We have a right to be proud of this new plant. Two hundred more jobs have been added to the life of our community and new property has been placed on the Bristol grand list.

"I think it is significant that a 105-year-old company, steeped in Yankee tradition and pride of craftsmanship, has erected a building which contains many of the improvements of mass production and automatic machinery. This makes it possible to produce more products with less physical effort. Every citizen in Connecticut can take pride in this positive accomplishment.

"The purchase of Accurate and its transfer here is a sign that we're growing. We are looking ahead to a brighter and more prosperous future for all of us."

Story of Growth at Haydon Manufacturing Co.

(Continued from page 8)

plications as time payment meters for appliances, coin-operated controls for radios, television, amusements and games, drives for novelty and children's clocks, telephone answering devices, vending machines, animated advertising drives, audience reaction meters and lawn sprinkler controls. In the appliance field, motors go into clocks, door chimes, defrosters, dish washers, clothes washers, clothers dryers, range controls and water softeners. The market for plant equipment takes motors for products such as chart drives, process controls, humidity and temperature controls, test equipment, and dust collectors. The commercial, medical and office equipment fields are represented by traffic controls, battery chargers, time meters, street light controls, carrier current control for off-peak water heating, respirators, electro-cardiographs, coffee-makers, office copying equipment, x-ray apparatus, milk dispensers, hand dryers and laundry equipment. Above all, motors are sold to other manufactures of timers of many, many types, operating in a field where the trend to automation provides a market constantly expanding in both volume and in applications.

The present officers of the company are:

Donald J. Hawthorne—President
Carl H. Cummings
Vice President and Gen. Manager
Gerald G. Ellis—Treasurer
John H. Schmidt—Secretary

CONNECTICUT ADVERTISING SERVICES

A DESCRIPTION OF THE PRINCIPAL ADVERTISING SERVICES RENDERED BY LEADING ADVERTISING AGENCIES IN THE STATE.

IT'S MADE IN CONNECTICUT

EDITOR'S NOTE: This department, giving a partial list of peace-time products manufactured in Connecticut by company, seeks to facilitate contacts between prospective purchasers in domestic or foreign markets and producers. It includes only those listings purchased by Connecticut manufacturers. Interested buyers may secure further information by writing this department. Connecticut manufacturers desiring to list their products in this department should write the Editor for lising rates.

(Advertisement)

Accounting Forms
Baker-Goodyear Co The — New Haven

Accounting Machines
Underwood Corporation — Bridgeport

Adding Machines
Underwood Corporation — Bridgeport

Adhesives
Polymer Industries Inc — Springdale

Advertising Mats
Lockwood Sons Inc Wm H — Hartford

Advertising Plates
Lockwood Sons Inc Wm H — Hartford

Advertising Specialties
H C Cook Co The 32 Beaver St — Ansonia
Halco Co — New Haven

Aerosol Products
Bridgeport Brass Company — Bridgeport

Air Compressors
Spencer Turbine Co The — Hartford

Air-Conditioning
Bush Manufacturing Co The — West Hartford
Norwalk Airconditioning Corp The (forced air heating units oil fired) — South Norwalk

Air Ducts
Wiremold Co The (Retractable) — Hartford

Air Heaters—Direct Fired
Peabody Engineering Corporation — Stamford

Air Impellers
The Torrington Manufacturing Co — Torrington

Aircraft
Sikorsky Aircraft Division United Aircraft Corporation (helicopters) — Bridgeport

Aircraft Accessories
Chandler Evans Div Pratt & Whitney Co Inc. (Piston and Jet Engine Accessories—Carburetors, Fuel Controls, Afterburner Regulators, Pumps, Servomechanisms and Protek Plugs) — West Hartford
Fenn Mfg Co The (Hardened and Ground Gears assemblies) — Newington
Gabb Special Products Div E Horton & Son Company (filler caps—pressure fuel servicing systems) — Windsor Locks
Hamilton Standard Div United Aircraft Corp (propellors and other aircraft equipment) — Windsor Locks
Manning Maxwell & Moore Inc (aircraft pressure switches and jet engine afterburner control systems) — Danbury
Russell Manufacturing Company The (CAA approved safety belts; webbing and hardware for safety belts; shock rings and shock cord; ring and cord hardware; webbing for all aircraft applications) — Middletown

Aircraft Components
Aircraft Welding & Mfg Co Inc — Hartford

Aircraft Fasteners
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) — Waterbury

Aircraft Instruments
Gorn Electric Company Inc — Stamford

Aircraft—Repair & Overhaul
Airport Department Pratt & Whitney Aircraft Division — Rentschler Field East Hartford

Aircraft Sheet Metal Work
Aero Form Co — New Haven

Aircraft Studs & Bolts
Britton Mfg Co Inc The — Hartford

Aircraft Test Equipment
United Manufacturing Co Division of The W L Maxson Corp — Hamden

Alumilite Aluminum Sheets
Leed Co The H A — Hamden

Aluminum Bronze Castings
Knapp Foundry Company Inc — Guilford

Aluminum Castings
Consolidated Industries Inc — West Cheshire
Eastern Malleable Iron Company The — Naugatuck
Newton-New Haven Co 688 Third Avenue — West Haven
Charles Parker Company The — Meriden

Aluminum Extrusions
Bridgeport Brass Company — Bridgeport

Aluminum Forgings
Bridgeport Brass Company — Bridgeport
Consolidated Industries Inc — West Cheshire
Scovill Manufacturing Company — Waterbury 91

Aluminum Ingots
Lapides Metals Corp — New Haven

Aluminum Lasts
United States Rubber Company Shoe Hardware Division — Waterbury

Aluminum—Sheet and Rod
Scovill Manufacturing Company — Waterbury

Aluminum—Sheets & Coils
United Smelting & Aluminum Co Inc — New Haven

Ammunition
Arms and Ammunition Div Olin Mathieson Chemical Corp — New Haven
Remington Arms Co Inc and Peters Cartridge Div — Bridgeport

Anodizing
Comco Inc Div of Enthone Inc — New Haven
Leed Co The H A — Hamden

Anodizing Equipment
Comco Inc Div of Enthone Inc — New Haven

Asbestos
Auburn Manufacturing Company The (gaskets, packings, wicks) — Middletown

Asbestos & Rubber Packing
Colt's Manufacturing Company — Hartford

Asarcon Bronze
Knapp Foundry Company Inc (bushing & bearing stock) — Guilford

Assemblies—Small
Barnes Co The Wallace Div Associated Spring Corp — Bristol
Greist Manufacturing Co The — New Haven
Humason Mfg Co The — Forestville
J H Sessions & Son — Bristol

Auto Cable Housing
Wiremold Company The — Hartford

Automatic Control Instruments
Bristol Co The (temperature, pressure, flow, humidity, time) — Waterbury

Automobile Accessories
Kilbourn-Sauer Company (lights and other accessories) — Fairfield

Automotive Bodies
Metropolitan Body Company — Bridgeport

Automotive Parts
Eis Manufacturing Co (Hydraulic and Mechanical) — Middletown
Raybestos Division of Raybestos-Manhattan Inc (Brake Lining, Lined Brake Shoes, Clutch Facings, Automatic Transmission Parts, Fan Belts, Radiator Hose and Miscellaneous Rubber) — Bridgeport

Automotive & Service Station Equipment
Scovill Manufacturing Company (Canned Oil Dispensers) — Waterbury 91

Automotive Tools
Eis Manufacturing Company — Middletown

Bags—Paper
Continental Can Co Paper Container Div — Kensington

Bakelite Moldings
Watertown Mfg Co The — Watertown

Balls
Abbott Ball Co The (steel bearing and burnishing) — Hartford
Hartford Steel Ball Co The (steel bearing and burnishing, brass, bronze, monel, stainless aluminum) — Hartford
Kilian Steel Ball Corp The — Hartford

Banbury Mixers
Farrel-Birmingham Company Inc — Ansonia

Barrels
Abbott Ball Co The (burnishing and tumbling) — Hartford
Hartford-Steel Ball Co The (tumbling) — Hartford

Baskets—Wire
Rolock Inc — Fairfield

Bathroom Accessories
Autoyre Company The — Oakville
Charles Parker Co The — Meriden

Batteries
Electrical Div Olin Mathieson Chemical Corp (flashlight, radio, hearing aid and others) — New Haven

Bearings
Fafnir Bearing Co (ball) — New Britain
Marlin-Rockwell Corporation — Plainville
New Departure Div of General Motors (ball) — Bristol
Norma-Hoffmann Bearings Corp (ball and roller) — Stamford

Bellows
Bridgeport Thermostat Company Inc (metallic) — Bridgeport

Bellows Assemblies
Bridgeport Thermostat Company Inc — Bridgeport

Bellows Shaft Seal Assemblies
Bridgeport Thermostat Company Inc — Bridgeport

Bells
Bevin Brothers Mfg Co — East Hampton
Gong Bell Co The — East Hampton
N N Hill Brass Co The — East Hampton

Belt Fasteners
Saling Manufacturing Company (patented self-aligning) — Unionville

Belting
Hartford Belting Co — Hartford
Russell Mfg Co The — Middletown

Bends—Pipe or Tube
National Pipe Bending Co The — 160 River St New Haven

Bicycle Coaster Brakes
New Departure Div General Motors Corp — Bristol

Bicycle Sundries
New Departure Div General Motors Corp — Bristol

Binders Board
Colonial Board Company — Manchester

Blacking Salts for Metals
Enthone Inc — New Haven
Mitchell-Bradford Chemical Co — Bridgeport

Black Oxide Treatment
Bennett Metal Treating Co The 1045 New Britain Ave — Elmwood

Blades
Capewell Manufacturing Company Metal Saw Division (hack saw and band saw) — Hartford

Blocks
Howard Company (cupola fire clay) — New Haven

Blower Fans
Colonial Blower Company — Plainville
Spencer Turbine Co The — Hartford

(Advt.)

Blower Systems
Colonial Blower Company — Plainville
Ripley Co — Middletown

Blueprints and Photostats
Joseph Merritt & Co — Hartford

Boilers
Bigelow Co The — New Haven
General Electric Company (Residential oil and gas fired steam and hot water) — Bridgeport

Bolts and Nuts
Blake & Johnson Co The (nuts machine screw-bolts, stove) — Waterville
Clark Brothers Bolt Co — Milldale

Bonderizing
Clairglow Mfg Company — Portland

Box Board
Federal Paper Board Co Inc — Montville, New Haven & Versailles
Lydall & Foulds Paper Co The — Manchester
Robertson Paper Box Co — Montville
Gair Company Inc Robert — Montville
New Haven Board and Carton Co The — New Haven

Boxes
Clairglow Mfg Company (metal) — Portland
Connecticut Container Corporation — New Haven
Gair Company Inc Robert (corrugated and solid fibre shipping containers) — Portland
Merriam Mfg Co (steel cash, bond, security, fitted tool and tackle boxes) — Durham
Warner Bros Co The (Acetate, Paper, Acetate and Paper Combinations, Counter Display, Setup) — Bridgeport

Boxes and Crates
City Lumber Co of Bridgeport Inc The — Bridgeport

Boxes—Metal
Merriam Mfg Co (Bond and Security, Cash and Utility, Personal Files and Drawer Safes) — Durham
Scovill Manufacturing Company (aluminum, brass, bronze, copper-cosmetic, drug, hair pin, ointment, pill, powder, rouge, vanity) — Waterbury

Boxes—Paper—Folding
Atlantic Carton Corp — Norwich
Bridgeport Paper Box Co — Bridgeport
Curtis & Sons Inc S — Sandy Hook
Folding Cartons Incorporated (paper, folding) — Versailles
Gair Company Inc Robert — Montville
H J Mills Inc — Bristol
National Folding Box Co Inc (paper folding) — New Haven and Versailles
New Haven Board and Carton Co The — New Haven
Robertson Paper Box Co — Montville
Warner Bros Co The — Bridgeport

Boxes—Paper—Setup
Box Shop Inc The — New Haven
Bridgeport Paper Box Co. — Bridgeport
Heminway Corporation The — Waterbury
H J Mills Inc — Bristol
Strouse Adler Company The — New Haven
Warner Bros Co The — Bridgeport

Braid—Elastic & Non-elastic
Essex Mills Inc — Essex

Brake Cables
Eis Manufacturing Co — Middletown

Brake Linings
Raybestos Division of Raybestos-Manhattan Inc (Automotive and Industrial) — Bridgeport
Russell Mfg Co The — Middletown

Brake Service Parts
Eis Manufacturing Co — Middletown

Brass & Bronze
American Brass Co The (sheet, wire, rods, tubes) — Waterbury
Bridgeport Brass Company (sheet, rod, wire and tubing) — Bridgeport
Bristol Brass Corp The (sheet, wire, rods) — Bristol
Chase Brass & Copper Co — Waterbury
Miller Company The (phosphor bronze and brass in sheets, strips, rolls) — Meriden
Plume & Atwood Mfg Co The (sheet, wire, rod) — Thomaston
Scovill Manufacturing Company — Waterbury 91
Seymour Mfg Co The (strip, sheet & wire) — Seymour
Tinsheet Metals Co The (sheets and rolls) — Waterbury
Western Brass Mills Division of Olin Industries Inc (sheet, strip) — New Haven

Brass & Bronze Ingot Metal
Mitchell Smelting & Refining Co Inc — Botsford
Plume & Atwood Mfg Co The — Thomaston
Whipple and Choate Company The — Bridgeport

Brass, Bronze, Aluminum Castings
Charles Parker Company The — Meriden
Victors Brass Foundry Inc — Guilford

Brass Goods
American Brass Company The — Waterbury
Plume & Atwood Mfg Co The (to order) — Waterbury
Rostand Mfg Co The (Ecclesiastical Brass Wares) — Milford
Scovill Manufacturing Company (to order) — Waterbury 91
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Brass Mill Products
American Brass Company The — Waterbury
Bridgeport Brass Co — Bridgeport
Chase Brass & Copper Co — Waterbury
Plume & Atwood Mfg Co The — Thomaston
Scovill Manufacturing Company — Waterbury 91
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Brick-Building
Donnelly Brick Co The — New Britain

Bricks—Fire
Howard Company — New Haven
Mullite Refractories Co The — Shelton

Bright Wire Goods
Sargent & Company (Screw Eyes, Screw Hooks, Cup Hooks, Hooks and Eyes, C H Hooks) — New Haven

Broaching
Hartford Special Machinery Co The — Hartford

Bronze & Aluminum Castings
Charles Parker Co — Meriden
Knapp Foundry Company Inc (rough or machined) — Guilford

Brooms—Brushes
Fuller Brush Co The — Hartford

Buckles
B Schwanda & Sons — Staffordville
G E Prentice Mfg Co The — Kensington
Hawie Mfg Co The — Bridgeport
North & Judd Manufacturing Co — New Britain
Patent Button Co The — Waterbury
Risdon Manufacturing Co John M Russell Div — Naugatuck
United States Rubber Company Shoe Hardware Division — Waterbury

Buffing & Polishing Compositions
Apothecaries Hall Co — Waterbury
Lea Mfg Co — Waterbury

Burners
Plume & Atwood Mfg Co The (kerosene oil lighting) — Thomaston

Burners—Automatic
Peabody Engineering Corporation — Stamford

Burners—Coal and Oil
Peabody Engineering Corporation (Combined) — Stamford

Burners—Gas
Peabody Engineering Corporation (Blast Furnace) — Stamford

Burners—Gas and Oil
Peabody Engineering Corporation (Combined) — Stamford

Burners—Refinery
Peabody Engineering Corporation (For Gas and Oil) — Stamford

Burnishing
Abbott Ball Co The (Burnishing Barrells and Burnishing Media) — Hartford

Burs
Pratt & Whitney Co Inc — West Hartford

Busways
Distribution Assemblies Department, General Electric Co — Plainville

Buttons
B Schwanda & Sons — Staffordville
Frank Parizek Manufacturing Co The — Putnam
Patent Button Co The — Waterbury
Scovill Manufacturing Company (Uniform and Tack Fasteners) — Waterbury 91
Waterbury Companies Inc (Uniform and Fancy Dress) — Waterbury

Cabinets
Charles Parker Co The (medicine) — Meriden

Cabinet Work
Hartford Builders Finish Co — Hartford

Cable—Asbestos Insulated
Rockbestos Products Corp — New Haven

Cable-Interlocked Armor
General Electric Company — Bridgeport

Cable—Nonmetallic Sheathed
General Electric Company — Bridgeport

Cable—Service Entrance
General Electric Company — Bridgeport

Cages
Andrew B Hendryx Co The (bird and animal) — New Haven

Cams
American Cam Company Inc — Hartford
Hartford Special Machinery Co The — Hartford
Rowbottom Machine Company Inc — Waterbury

Canvas Products
F B Skiff Inc — Hartford

Capacitors
Electro Motive Mfg Co Inc The (mica & trimmer) — Willimantic

Carbide Drawing Dies
State Products Co (eyelet special shape dies) — Oakville

Carbide Shape Dies
Thomaston Tool & Die Co (any form) — Thomaston

Carbide Tools
Precision Tool & Die Co — Waterbury

Card Clothing
Standard Card Clothing Co The (for textile mills) — Stafford Springs

Carpenter's Tools
Sargent & Company (Planes, Squares, Plumb Bobs, Bench Screws, Clamps and Saw Vices) — New Haven

Carpet
B F Goodrich Sponge Products Division — Shelton

Carpet Cushion
B F Goodrich Sponge Products Division — Shelton

Carpets and Rugs
Bigelow-Sanford Carpet Co — Thompsonville

Casters
Bassick Company The (Industrial and General) — Bridgeport

Casters—Industrial
George P Clark Co — Windsor Locks

Castings
Connecticut Foundry Co (grey iron) — Rocky Hill
Connecticut Malleable Castings Co (malleable iron castings) — New Haven
Consolidated Industries Inc — West Cheshire
Charles Parker Company The (brass, bronze, aluminum) — Meriden
Ductile Iron Foundry Inc — Stratford
Eastern Malleable Iron Company The (malleable iron, metal and alloy) — Naugatuck
Farrel-Birmingham Company Inc (Meehanite, Nodular, Iron, Steel) — Ansonia
Hartford Electric Steel Corp The (stainless steel) — Hartford
Plainville Casting Company (gray, alloy and high tensile irons) — Plainville
Malleable Iron Fittings Co (malleable iron and steel) — Branford
McLagon Foundry Co (grey iron) — New Haven
Newton-New Haven Co (zinc and aluminum) — 688 Third Ave West Haven
Philbrick-Booth & Spencer Inc (grey iron) — Hartford
Producto Machine Company The — Bridgeport
Scovill Manufacturing Company (Brass & Bronze) — Waterbury 91
Turner & Seymour Mfg Co The (gray iron, semi steel and alloy) — Torrington
Union Mfg Co (grey iron & semi steel) — New Britain
Waterbury Foundry Company The (highway & sash weights) — Waterbury
Wilcox Crittenden & Co Inc (gray iron and brass) — Middletown

Castings—Investment
Arwood Precision Casting Corp — Groton

Cements—Refractory
Mullite Refractory Co The — Shelton

Chain
Risdon Manufacturing Co John M Russel Div — Naugatuck
Turner and Seymour Mfg Co The (weldless, sash, jack, safety, furnace, universal, lion and cable) — Torrington

Chain—Bead
Auto-Swage Products Inc — Shelton
Bead Chain Mfg Co The — Bridgeport

Chain—Power Transmission and Conveying
Whitney Chain Company — Hartford

Chairs
The Hitchcock Chair Company — Riverton

Chemical Manufacturing
Carwin Company The — North Haven

Chemicals
American Cyanamid Company — Waterbury
Apothecaries Hall Co — Waterbury
Carwin Company The — North Haven
Macalaster Bicknell Company — New Haven
MacDermid Incorporated — Waterbury
Naugatuck Chemical Division United States Rubber Co — Naugatuck
New England Lime Company — Canaan
Pfizer & Co Inc Chas — Groton

Chemicals—Agriculture
Naugatuck Chemical Division United States Rubber Co (insecticides, fungicides, weed killers) — Naugatuck

Christmas Light Clips
Foursome Manufacturing Co — Bristol

Chromium Plating
Chromium Corp of America — Waterbury
Chromium Process Company The — Shelton
City Plating Works Inc — Bridgeport

Chucks
Cushman Chuck Co The — Hartford
Horton Chuck Div The E Horton & Son Company — Windsor Locks
Jacobs Manufacturing Co The — West Hartford
Union Manufacturing Company — New Britain

Chucks—Drill
Jacobs Manufacturing Co The — West Hartford

Chucks & Face Plate Jaws
Cushman Chuck Co The — Hartford
Union Mfg Co — New Britain
Horton Chuck Div The E Horton & Son Company — Windsor Locks

Chucks—Power Operated
Cushman Chuck Co The — Hartford
Union Manufacturing Company — New Britain

Circuit Breakers
Trumbull Components Department, General Electric Co — Plainville

Circulating Pumps
Corley Co Inc The — Plainville

Clay
Howard Company (Fire Howard "B" and High Temperature Dry) — New Haven

Cleaning Compounds
Enthone Inc (Industrial) — New Haven
Foy Electro-Chemical Co (industrial) — Ansonia

Cleansing Compounds
MacDermid Incorporated — Waterbury

Clock Mechanisms
Lux Clock Mfg Co The — Waterbury

Clocks
E Ingraham Co The — Bristol
Seth Thomas Clocks — Thomaston
United States Time Corporation The — Waterbury

Clocks—Alarm
Lux Clock Mfg Co The — Waterbury

Clocks—Automatic Cooking
Lux Clock Mfg Co The — Waterbury

Clutches
Snow-Nabstedt Gear Corp The — New Haven

Clutch Facings
Raybestos Division of Raybestos-Manhattan Inc (Molded, Woven, Semi-metallic and Full-metallic) — Bridgeport
Russell Mfg Co The — Middletown

Coatings
Bischoff Chemical Corporation (Peelable Plastic Coatings) — Ivoryton

Coil Winding Machines
Boesch Mfg Co Inc — Danbury

Coils
Dano Electric Company — Winsted

Coils—Electric
Bittermann Electric Company — Canaan

Coils—Pipe or Tube
National Pipe Bending Co The 160 River St — New Haven
Whitlock Manufacturing Co The — Hartford

Cold Molded Electrical Insulation
Meriden Molded Plastics — Meriden

Commercial Heat Treating
A F Holden Company The 52 Richard St — West Haven

Commercial Truck Bodies
Metropolitan Body Company — Bridgeport

Compacts
Scovill Manufacturing Company (powder and rouge) — Waterbury

Comparators
Pratt & Whitney Co Inc (Electro-limit and Air-O-Limit) — West Hartford

Complete Plating Dept. Installations
Foy Electro-Chemical Co — Ansonia

Compressors
Norwalk Company Inc (high pressure air and gas) — South Norwalk

Computers
Newton Co The (electronic) — Manchester
Reflectone Corporation The — Stamford

Concrete Products
Plastricrete Corp — Hamden

Condenser and Heat Exchanger Tubes
Bridgeport Brass Company — Bridgeport
Scovill Manufacturing Company — Waterbury

Cones
Sonoco Products Co (Climax-Lowell Div) (Paper) — Mystic

Consulting Engineers
McNeal J D (Electrical and Electronic) — New Haven
Stanley P Rockwell Co Inc The (Consulting) 296 Homestead Ave — Hartford

Continuous Mill Gages
Pratt & Whitney Co Inc — West Hartford

Contract Machining
Laurel Mfg Co Inc (Precision Production Small Parts) — Plainville
Malleable Iron Fittings Company — Branford
Charles Parker Co — Meriden

Contract Manufacturers
Fenn Mfg Co The (Precision Machine Work) — Newington
Greist Mfg Co The (metal parts and assemblies) 503 Blake St — New Haven
Merriam Mfg Co (production runs—metal boxes and containers to specifications) — Durham
Charles Parker Co (sheet metal fabricators) — Meriden
Plume & Atwood Mfg Co The (metal parts and assemblies) — Thomaston
Scovill Manufacturing Company (metal parts and assemblies) — Waterbury 91
J H Sessions & Son — Bristol

Controllers
Bristol Company The — Waterbury
Manning Maxwell & Moore Inc — Stratford

Controls—Remote
Panish Controls (Remote Controls for Marine & Aeronautic Applications) — Bridgeport

Converters DC to AC
Electric Specialty Co — Stamford

Conveyor Systems
Leeds Conveyor & Mfg Co The — East Haven
Production Equipment Co — Meriden

Copper
American Brass Corp The (sheet, wire, rods, tubes) — Waterbury
Bridgeport Brass Company (sheet, rod, wire and tubing) — Bridgeport
Bristol Brass Corp The (steel) — Bristol
Chase Brass & Copper Co (sheet, rod, wire tube) — Waterbury
Thinsheet Metals Co The (sheets and rolls) — Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp — New Haven

Copper Castings
Knapp Foundry Company Inc — Guilford

Copper Sheets
American Brass Company The — Waterbury
New Haven Copper Co The — Seymour

Copper Shingles
New Haven Copper Co The — Seymour

Copperware
Bridgeport Brass Company (cooking utensils) — Bridgeport

Copper Water Tube
American Brass Company The — Waterbury
Bridgeport Brass Co — Bridgeport

Cords—Asbestos Insulated
General Electric Company — Bridgeport

Cords—Braided
General Electric Company — Bridgeport

Cords—Heater
Essex Mills Inc — Essex
General Electric Company — Bridgeport

Cords—Portable
General Electric Company — Bridgeport

Cord Sets—Electric
General Electric Company — Bridgeport
Seeger-Williams Inc — Bridgeport

Cork Cots
Sonoco Products Co (Climax-Lowell Div) — Mystic

Corrugated Box Manufacturers
Connecticut Container Corporation — New Haven
Corrugated Containers Inc — Hartford

Corrugated Shipping Cases
Connecticut Container Corporation — New Haven
Connecticut Corrugated Box Div Robert Gair Co Inc — Portland
D L & D Container Corp 87 Shelton Ave — New Haven

Cosmetic Containers
Eyelet Specialty Co The — Waterbury
Plume & Atwood Mfg Co The (metal) — Thomaston
Scovill Manufacturing Company — Waterbury

Cosmetics
J B Williams Co The — Glastonbury

Cotton and Asbestos Wicking
Bland Burner Co The — Hartford

Cotton Yarn
Floyd Cranska Co The — Moosup

Counting Devices
Veeder-Root Inc — Hartford

Couplings
Scovill Manufacturing Company (hose and tube) — Waterbury

Couplings—Self-Sealing
Sperry Products Inc — Danbury

Cranes and Conveyors
J-B Engineering Sales Co — New Haven

Crushers
Farrel-Birmingham Company Inc (Stone and Ore) — Ansonia

Cups—Paper
Continental Can Co Paper Container Div — Kensington

Cushioning for Packaging
B F Goodrich Sponge Products Division — Shelton
Gilman Brothers Co The — Gilman

Cut Stone
Dextone Co The — New Haven

Cutters
Barnes Tool Company The (pipe cutters, hand) — New Haven
Mitrametric Co The (ground pinion) — Torrington
Pratt & Whitney Co Inc (Milling Cutters all types) — West Hartford

Cutting & Creasing Rule
Bartholomew Co H I — Bristol

Cyl. Gauges & Tools
J & S Machine Co Inc — Hartford

Deep Hole Drilling & Reaming
Hamden Deep Hole Drilling Co — Hamden
Wilson Arms Co The — Hartford

Deep Drawings
Stanley Pressed Metal — New Britain

Delayed Action Mechanism
M H Rhodes Inc — Hartford
R W Cramer Company Inc The — Centerbrook

Demineralizers
Crystal Research Laboratories — Hartford
Foy Electro-Chemical Co (industrial) — Ansonia

Development Work
Saybrook Manufacturing Inc — Old Saybrook

Diamonds—Industrial
Diamond Tool and Die Works — Hartford

Dictating Machines
Dictaphone Corporation — Bridgeport
Gray Manufacturing Company The — Hartford
SoundScriber Corporation The — New Haven

Die Cast Dies
C & F Tool & Die Corp — Bridgeport

Die Castings
Mt Vernon Die Casting Co — Stamford
Newton-New Haven Co Inc — New Haven

Die Casting Dies
ABA Tool & Die Co — Manchester
Eastern Machine Screw Corp The — Truman & Barclay Sts New Haven
Parker Stamp Works Co The — Hartford
Weimann Bros Mfg Co The — Derby

Die Heads—Self Opening
Eastern Machine Screw Corp The — New Haven
Geometric Tool Division, Greenfield Tap & Die Corp — New Haven

Die Polishing Machinery
Hartford Special Machinery Co The — Hartford

Die Sets
Pratt & Whitney Co Inc (Precision) — West Hartford
Producto Machine Company The — Bridgeport
Union Mfg Co (precision, steel and semi-steel) — New Britain

Die Sinkers
Pratt & Whitney Co Inc — West Hartford

Dies
Hoggson & Pettis Mfg Co The — 141 Brewery St New Haven
Mitrametric Co The (ground for gears) — Torrington
Parker Stamp Works Inc The (plastics and die castings) — Hartford
Pratt & Whitney Co Inc (Monocone and Ducone Dies) — West Hartford
Precision Engineering Co Inc (forging, trimming & blanking) — Southington

Dies & Die Cutting
Douglas Co Geo M — New Haven

Dies and Die Sinking
Consolidated Industries — West Cheshire

Dish Drying Machines
Colt's Manufacturing Company — Hartford

Dish Washing Machines
Colt's Manufacturing Company — Hartford

Display Containers
National Folding Box Co Inc (folding paperboard) — New Haven and Versailles

Displays—Metal
Durham Mfg Co The (Designing & Mfg to customers' specifications) — Durham
Merriam Mfg Co (Contract Work to Individual Specifications) — Durham
Parsons Co Inc W A (custom designed)

Distribution Centers
Distribution Assemblies Department, General Electric Co — Plainville

Door Closers
Sargent & Company — New Haven
Yale & Towne Mfg Co The — Stamford

Doors
Bilco Co The (metal, residential and commercial) — West Haven

Dowel Pins
Allen Manufacturing Co The — Hartford
Holo-Krome Screw Corp The — West Hartford

Drafting Accessories
Joseph Merritt & Co — Hartford

Draft Inductors
Corley Co Inc The — Plainville

Drill Presses
Townsend Mfg Co The H P — Elmwood

Drilling Machines
Howe & Faut Inc (Turret Type) — East Norwalk
Pratt & Whitney Co Inc (Deep Hole) — West Hartford

Drilling and Tapping Machinery
Hartford Special Machinery Co The — Hartford

Drop Forgings
Atwater Mfg Co — Plantsville
Billings & Spencer Co The — Hartford
Consolidated Industries — West Cheshire
Wilcox Crittenden & Co Inc — Middletown

Druggists' Rubber Sundries
Seamless Rubber Company The — New Haven

Duplicating Machines—Automatic
Pratt & Whitney Co Inc — West Hartford

Duplicator Tables
Regent Machine Co — Bridgeport

Elastic Narrow Fabric
Essex Mills Inc — Essex

Electric Cables
General Electric Company (for residential, commercial and industrial applications) — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Clocks
Sessions Clock Co The (alarm, kitchen, occasional and office) — Forestville

Electric—Commutators & Segments
Cameron Elec Mfg Co The (rewinding motors) — Ansonia

Electric Cord Springs
Bristol Spring Manufacturing Co — Plainville

Electric Cords
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Eye Control
Ripley Company Inc — Middletown

Electric Fixture Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Hand Irons
Winsted Hardware Mfg Co (trade mark "Durabilt") — Winsted

Electric Heating Elements
Hartford Element Co — Hartford

Electric Ignition Harnesses
General Electric Company — Bridgeport

Electric Insulation
Case Brothers Inc — Manchester
Stevens Paper Mills Inc The — Windsor

Electric Lighting Fixtures
Fan-Craft Mfg Co (residential, church, post lanterns) — Plainville
Plume & Atwood Mfg Co The — Thomaston
Wasley Products Inc — Plainville

Electric Motor Controls
Arrow-Hart & Hegeman Electric Co The — Hartford

Electrical Outlet and Switch Boxes, and Covers
General Electric Company — Bridgeport

Electric Signs
Berger Sign Co — Hartford
United Advertising Corp — New Haven

Electric Switches
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Time Controls
R W Cramer Company Inc The — Centerbrook

Electric Timers
Sessions Clock Co The — Forestville

Electric Timing Motors
Sessions Clock Co The (small) — Forestville

Electric Underfloor Duct System
General Electric Company — Bridgeport

Electric Wire
General Electric Company — Bridgeport
Rockbestos Products Corp (asbestos insulated) — New Haven

Electric Wiring Devices
Arrow-Hart & Hegeman Electric Co The — Hartford

Electric Woven Heating Elements
Pre-Fab Heating Co Inc — Guilford

Electrical Conduit Fittings & Grounding Specialties
Gillette-Vibber Company The — New London

Electrical Connectors
Burndy Engineering Co Inc — Norwalk

Electrical Control Apparatus
Plainville Electrical Products Co The — Plainville

Electrical Goods
A C Gilbert Co — New Haven

Electrical Motors
Electric Specialty Co — Stamford
U S Electrical Motors Inc — Milford

Electrical Recorders
Bristol Co The — Waterbury

Electrical Relays and Controls
Allied Control Co — Plantsville

Electrical Switchboards
Plainville Electrical Products Co The — Plainville

Electrical Test Equipment
McNeal J D — New Haven

Electrical Wiring Systems
Wiremold Co The — Hartford

Electronic Parts
Terryville Manufacturing Co (Stampings to customer specifications — Terryville

Electronics
Gray Manufacturing Company The — Hartford
McNeal J D — New Haven
Newton Co The — Manchester
Ripley Co — Middletown
Sturrup Larabee & Warmers Inc — Middletown

Electroplating
National Sherardizing & Machine Co — Hartford
Waterbury Plating Company — Waterbury

Electroplating—Equipment & Supplies
Comco Inc Div of Enthone Inc — New Haven
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Electroplating & Industrial Selenium Rectifiers
Foy Electro Chemical Co — Ansonia

Electroplating Processes & Supplies
Enthone Inc — New Haven
United Chromium Incorporated — Waterbury

Electrotypes
Barnum-Hayward Electrotype Co Inc — New Haven
Lockwood Sons Inc Wm H — Hartford
New Haven Electrotype Div Electrographic Corp — New Haven

Elevators
Eastern Machinery Co The (passenger and freight) — New Haven
General Elevator Service Co — Hartford

Enameling
Conn Metal Finishing Co — Hamden
Waterbury Plating Company — Waterbury

Enameling and Finishing
Clairglow Mfg Co — Portland

End Milling Cutters
Pratt & Whitney Co Inc — West Hartford

Engines
Pratt & Whitney Aircraft Div United Aircraft Corp (aircraft) — East Hartford
Wolverine Motor Works Inc (diesel stationary marine) — Bridgeport

Envelopes
Curtis 1000 Inc — Hartford
United States Envelope Company Hartford Division — Hartford (Advt.)

Envelopes—Stock and Special
Continental Can Co Paper Container Div Kensington

Extractors—Tap
Walton Company The West Hartford

Eyelets
American Brass Company The Waterbury
Platt Bros & Co The P O Box 1030 Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury 91
Stevens Co Inc Waterbury

Eyelets, Ferrules and Wiring Terminals
American Brass Company The Waterbury

Eyelet Machine Products
American Brass Company The Waterbury
Ball & Socket Mfg Co The West Cheshire
Cold Forming Mfg Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Stevens Co Inc Waterbury

Fabricators
Scovill Manufacturing Company (aluminum, brass, bronze, copper, steel) Waterbury

Fancy Dress Buttons and Buckles
Waterbury Companies Inc Waterbury

Fans—Electric
General Electric Company Bridgeport

Fasteners—Aircraft
Scovill Manufacturing Company (PANELOC Aircraft Fasteners) Waterbury

Fasteners—Laundry Proof
Scovill Manufacturing Company (GRIPPER snap fasteners) Waterbury

Fasteners—Slide & Snap
G E Prentice Mfg Co The Kensington
Scovill Manufacturing Company (GRIPPER zippers and GRIPPER snap fasteners) Waterbury

Felt
Auburn Manufacturing Company The (mechanical, cut parts) Middletown
Drycor Felt Company (paper makers and industrial) Staffordville

Felt—All Purpose
American Felt Co (Mill & Cutting Plant) Glenville
Chas W House & Sons Inc (Mills & Cutting Plant) Unionville

Fenders—Boat
B F Goodrich Sponge Products Division Shelton

Fiber-glass Fabrication
Davis Co The E J New Haven

Fibre Board
Case Brothers Inc Manchester
C H Norton Co The North Westchester
Stevens Paper Mills Inc The Windsor

File Cards
Standard Card Clothing Co The Stafford Springs

Films
Cine-Video Productions Inc Milford

Finger Nail Clippers
H C Cook Co The 32 Beaver St Ansonia

Firearms
Colt's Manufacturing Company Hartford
Junior Screw Machine Products Inc West Haven
Marlin Firearms Co The New Haven
O F Mosberg & Sons Inc New Haven
Remington Arms Company Inc Bridgeport
Arms and Ammunition Div Olin Mathieson Chemical Corp New Haven

Fire Hose
Fabrics Fire Hose (municipal and industrial) Sandy Hook

Fireplace Goods
American Windshield & Specialty Co The 881 Boston Post Road Milford
John P Smith Co The (screens) 423-33 Chapel St New Haven

Fireproof Floor Joists
Dextone Co The New Haven

Fireworks
M Backes' Sons Inc Wallingford

Fishing Lures
Dresser Products Inc Canaan

Fishing Tackle
H C Cook Co The 32 Beaver St Ansonia

Flashlights
Bridgeport Metal Goods Mfg Co Bridgeport
Electrical Div Olin Mathieson Chemical Corp New Haven

Flat Springs
Bristol Spring Manufacturing Co Plainville
Gemco Manufacturing Co Inc Southington

Flexible Shaft Machines
Pratt & Whitney Co Inc West Hartford

Floor & Ceiling Plates
Beaton & Cadwell Mfg Co The New Britain

Fluorescent Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Vanderman Manufacturing Co The Willimantic
Wiremold Company The Hartford

Foam Rubber
B F Goodrich Sponge Products Division Shelton

Forgings
Billings & Spencer Company Hartford
Capewell Manufacturing Company Hartford
Cawthra Bros Forge Co Shelton
Clark Brothers Bolt Co Milldale
Consolidated Industries Inc West Cheshire
Heppenstall Co (all kinds and shapes) Bridgeport
Scovill Manufacturing Company (Non-ferrous) Waterbury 91

Foundries
Connecticut Malleable Castings Co (malleable iron castings) New Haven
Ductile Iron Foundry Inc Stratford
Farrel-Birmingham Company Inc (Iron and Steel) Ansonia
Fritzell Foundry & Casting Co The New Haven
Hartford Electric Steel Corp The Hartford
Charles Parker Company The (brass, bronze, aluminum) Meriden
Plainville Casting Company (gray, alloy and high tensile irons) Plainville
Producto Machine Company The Bridgeport
Turner & Seymour Mfg Co The (gray, iron, semi steel and alloy) Torrington
Union Mfg Co (gray iron & semi steel) New Britain
Wilcox Crittenden & Co Inc (iron, brass, aluminum and bronze) Middletown

Fountain Pens and Mechanical Pencils
Waterman Pen Company Inc Seymour

Foundry Riddles
John P Smith Co The 423-33 Chapel St New Haven

Fuel Oil Pump and Heater Sets
Peabody Engineering Corporation Stamford

Furnaces
Norwalk Airconditioning Corp The (warm air oil fired) South Norwalk

Gage Blocks
Pratt & Whitney Co Inc (Alloy steel and Carbide, Hoke and USA) West Hartford

Galvanizing
Malleable Iron Fittings Co Branford
Wilcox Crittenden & Co Inc Middletown

Gaskets
Auburn Manufacturing Company The (from all materials) Middletown
Raybestos Division of Raybestos-Manhattan Inc Bridgeport
Tsingris Die Cutting Corp (from all materials) Waterbury

Gas Range Conversion Burner
Holyoke Heater Corp of Conn Inc Hartford

Gas Scrubbers, Coolers and Absorbers
Peabody Engineering Corporation Stamford

Gauges
Bristol Co The (pressure and vacuum-recording automatic control) Waterbury
Helicoid Gage Division American Chain & Cable Co The (pressure and vacuum) Bridgeport
Manning Maxwell & Moore Inc Stratford
Pratt & Whitney Co Inc (Precision Measurement all types) West Hartford

Gears
Mitrametric Co The (blanked fine pitch) Torrington

Gears and Gear Cutting
Farrel-Birmingham Company Inc Ansonia
Fenn Mfg Co The Newington
Hartford Special Machinery Co The Hartford

Glass Blowing
Macalaster Bicknell Company New Haven

Glass Cutters
Fletcher-Terry Co The Forestville

Glass Machinery
Tavano Mfg Co Torrington

Gold & Silver Plating
Donham Craft Inc (on metals & plastics) Thomaston

Golf Equipment
Horton Mfg Co The (clubs, shafts, balls, bags) Bristol

Greeting Cards
A D Steinbach & Sons Inc New Haven

Grinding
Farrel-Birmingham Company Inc (Roll and Cylinderical) Ansonia
Hartford Special Machinery Co The (gears, threads, cams and splines) Hartford
Horberg Grinding Industries Inc (Precision custom grinding; centerless, cylindrical, surfaces, internal and special) 19 Staples St Bridgeport

Grinding Heads—Internal
Pratt & Whitney Co Inc (Pneumatic, High Speed) West Hartford

Grinding Machines
Farrel-Birmingham Company Inc (Roll) Ansonia
Pratt & Whitney Co Inc (Surface, Die, Gear and Cutter Grinders) West Hartford
Rowbottom Machine Company Inc (cam) Waterbury

Grommets
American Brass Company The Waterbury
Plume & Atwood Mfg Co The Waterbury

Ground Rubber Rolls
Saybrook Manufacturing Inc Old Saybrook

Guards for Machinery
Wheeler Co The G E New Haven

Hack and Band Saw Blades
Capewell Manufacturing Co The Hartford

Hammers—Carpenters and Machinests
Capewell Manufacturing Company Hartford

Hand Tools
Billings and Spencer Company (wrenches, sockets and shop tools) Hartford
Bridgeport Hdwe Mfg Corp The (nail pullers, scout axes, box opening tools, trowels, coping saws, putty knives) Bridgeport

Hardness Testers
Wilson Mechanical Instrument Div American, Chain & Cable Company Inc Bridgeport

Hardware
Bassick Company The (Automotive) Bridgeport
Harlock Products Corp New Haven
Sargent & Company New Haven
Wilcox Crittenden & Co Inc (marine heavy and industrial) Middletown
Yale & Towne Mfg Co The Stamford

Hardware—Marine & Bus
Rostand Mfg Co The Milford

Hardware—Trailer Cabinet
Excelsior Hardware Co The Stamford

Hardware, Trunk & Luggage
Corbin Cabinet Lock Div American Hardware Corp New Britain
J H Sessions & Son Bristol
Yale & Towne Mfg Co The Stamford

Hat Machinery
Doran Bros Inc Danbury

Health Surgical & Orthopedic Supports
Berger Brothers Company The (custom made for back, breast, and abdomen) New Haven

Heat Elements
Electroflex Heat Inc Hartford
Safeway Heat Elements Inc (woven wire resistance type) Middletown

Heat Exchangers
Whitlock Manufacturing Co The Hartford

Heat Treating
A F Holden Co The 52 Richard St West Haven
Bennett Metal Treating Co The 1045 New Britain Ave Elmwood
Commercial Metal Treating Co Bridgeport
New Britain-Gridley Machine Division The New Britain Machine Co New Britain
Stanley P Rockwell Co Inc The 296 Homestead Ave Hartford

Heat-Treating Equipment
Autoyre Company The Oakville
Barnes Co The Wallace Div Associated Spring Corp Bristol
A F Holden Company The 52 Richard Street West Haven (Main Plant)
Bauer & Company Inc Hartford
Rolock Inc (Retorts, Muffles, etc.) Fairfield
Stanley P Rockwell Co Inc The (commercial) 296 Homestead Ave Hartford

Heat Treating Fixtures
Rolock Inc (Trays, Baskets, etc.) Fairfield
Wiretex Mfg Co Inc Bridgeport

Heat Treating Salts and Compounds
A F Holden Company The 52 Richard Street West Haven
Mitchell-Bradford Chemical Co Bridgeport

Heaters—Electric
General Electric Company Bridgeport

Heating and Cooling Coils
G & O Manufacturing Co New Haven

Heating Elements
Hartford Element Co Hartford

Heavy Chemicals
Naugatuck Chemical Division United States Rubber Co (sulphuric, nitric and muriatic acids and aniline oil)

Hex-Socket Screws
Bristol Company The Waterbury
Holo-Krome Screw Corp The West Hartford

High Frequency Alternators
Electric Specialty Co Stamford

Highway Guard Rail Hardware
Malleable Iron Fittings Co Branford

Hinges
Homer D Bronson Company Beacon Falls

Hobs and Hobbings
ABA Tool & Die Co Manchester
Parker Stamp Works Inc The Hartford
Pratt & Whitney Co Inc (Die and Thread Milling) West Hartford

Hoists
J-B Engineering Sales Co New Haven

Hoists and Trolleys
Union Mfg Company New Britain

Hose Fittings
Don Mfg Co J M Naugatuck
Scovill Manufacturing Company Waterbury

Hose—Flexible Metallic
American Brass Co American Metal Hose Branch Waterbury

Hose Supporter Trimmings
Hawie Mfg Co The (So-Lo Grip Tabs) Bridgeport

Hospital Signal Systems
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Hydraulic Brake Fluids
Eis Manufacturing Co Middletown

Hydraulic Controls
Sperry Products Inc Danbury

Hypodermic Needles
Roehr Products Company Waterbury

Ice Buckets
B F Goodrich Sponge Products Division Shelton

Inductors
C G S Laboratories Inc Stamford

Industrial Chemicals
Foy Electro-Chemical Co Ansonia

Industrial Chrome Plating
Mirror Polishing & Buffing Co Waterbury

Industrial Displays
Sansone Co S Frederick (Designers Builders and Counselors) Short Beach

Industrial Finishes
Chemical Coatings Corporation Rocky Hill
United Chromium Incorporated Waterbury

Industrial Tools—Powder Actuated
Remington Arms Company Inc Bridgeport

Inks
Waterman Pen Company Inc Seymour

Insecticides
American Cyanamid Company Waterbury

Insulated Wire & Cable
Geneal Electric Company (for residential commercial and industrial applications) Bridgeport
Kerite Company The Seymour

Insulated Wire & Cable Machinery
Davis Electric Company Wallingford

Instruments
Bristol Company The Waterbury
J-P-T Instruments Inc (Electrical and Temperature) New Haven
Manning Maxwell & Moore Inc Stratford
Pratt & Whitney Co Inc (Precision Measuring) West Hartford

Insulation
Gilman Brothers Co The Gilman

Integrators
Reflectone Corporation The Stamford

Inter-Communications Equipment
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Interval Timers
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford

Jacquard
Case Brothers Inc Manchester

Japanning
J H Sessions & Son Bristol

Jig Borer
Moore Special Tool Co (Moore) Bridgeport
Pratt & Whitney Co Inc West Hartford

Jigs, Fixtures & Gages
Federal Machine & Tool Co Bristol

Jig Grinder
Moore Special Tool Co (Moore) Bridgeport

Keller Machines
Pratt & Whitney Co Inc West Hartford

Key Blanks
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Labels
J & J Cash Inc (Woven) South Norwalk
Naugatuck Chemical Division United States Rubber Co (for rubber articles) Naugatuck

Label Moisteners
Better Packages Inc Shelton

Laboratory Equipment
Eastern Industries Inc New Haven

Laboratory Supplies
Macalaster Bicknell Company New Haven

Laces
American Fabrics Company The Bridgeport
Wilcox Lace Corporation Middletown

Laces and Nettings
Wilcox Lace Corporation The Middletown

Lacquers & Synthetic Enamels
Chemical Coatings Corporation Rocky Hill
I-Sis Chemicals Inc Stamford
United Chromium Incorporated Waterbury

Ladders
A W Flint Co 196 Chapel St New Haven

Laminated Metal
Bridgeport Brass Company Bridgeport

Lamps
Plume & Atwood Mfg Co The (metal oil) Waterbury

Lampholders—Incandescent and Fluorescent
General Electric Company Bridgeport

Lamp Shades
Verplex Company The Essex

Lanterns—Battery Operated
Electrical Div Olin Mathieson Chemical Corp New Haven

Lathes—Contin-U-Matic
Bullard Company, The (vertical multi-spindle-continuous turning type) Bridgeport

Lathes—Man-Au-Trol
Bullard Company The Bridgeport

Lathes—Mult-Au-Matic
Bullard Company The (vertical multi-spindle-indexing type) Bridgeport

Lathes—Toolroom and Automatic
Pratt & Whitney Co Inc West Hartford

Lathes—Vertical Turret
Bullard Company The (single spindle) Bridgeport

Lead Plating
Christie Plating Co The Groton

Leather
Norwich Leather Co Norwich
Herman Roser & Sons Inc (Genuine Pigskin) Glastonbury

Leather Dog Furnishings
Andrew B Hendryx Co The New Haven
The Smith-Worthington Saddlery Co Hartford

Leather Goods Trimmings
G E Prentice Mfg Co The Kensington

Leather, Mechanical
Auburn Manufacturing Company The (packings, cubs, washers, etc) Middletown

Letterheads
Lehman Brothers Inc (designers, engravers, lithographers) New Haven

Levels—Machinist's Precision
Bullard Company The Bridgeport

Light Assemblies
Saybrook Manufacturing Inc Old Saybrook

Lighting Accessories—Fluorescent
General Electric Company Bridgeport

Lighting Equipment
Fullerton Manufacturing Corp Norwalk
Miller Co The (Miller, Duplexalite, Ivanhoe) Meriden

Lines—Braided
Essex Mills Inc Essex

Lime
New England Lime Company Canaan

Lipstick Cases
Scovill Manufacturing Company Waterbury

Lipstick Containers
Bridgeport Metal Goods Mfg Co Bridgeport
Plume & Atwood Manufacturing Co Waterbury

Lithographers
O'Toole & Sons Inc T Stamford

Lithographing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford
Lehman Brothers Inc New Haven
A D Steinbach & Sons New Haven

Locks—Banks
Yale & Towne Mfg Co The Stamford

Locks—Builders
Eagle Lock Co The Terryville
Sargent & Company New Haven
Yale & Towne Mfg Co The Stamford

Locks—Cabinet
Eagle Lock Co The Terryville
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Special Purpose
Eagle Lock Co The Terryville
Yale & Towne Mfg Co The Stamford

Locks—Suitcase
Eagle Lock Co The Terryville

Locks—Suitcase and Trimmings
Excelsior Hardware Co The Stamford

Locks—Trunk
Eagle Lock Co The Terryville
Excelsior Hardware Co The Stamford
Yale & Towne Mfg Co The Stamford

Locks—Zipper
Excelsior Hardware Co The Stamford

Loom—Non-Metallic
Wiremold Company The Hartford

Lumber & Millwork Products
City Lumber Co of Bridgeport Inc Bridgeport

Machetes
Collins Company The Collinsville

Lubricants—High Pressure
Alpha Molykote Corp The Stamford

Lubricants—High Temperature
Alpha Molykote Corp The Stamford
(Advt.)

Machine Design
Black Rock Mfg Company The Bridgeport

Machine Tool Designers
R & S Company New Britain

Machine Tools
Bullard Company The Bridgeport
Pratt & Whitney Co Inc West Hartford
Producto Machine Company The Bridgeport

Machine Work
Black Rock Mfg Company The Bridgeport
Farrel-Birmingham Company Inc Ansonia
Fenn Manufacturing Company The (precision parts) Newington
Hartford Special Machinery Co The (contract work only) Hartford
National Sheradizing & Machine Co (job) Hartford
Parker Stamp Works Inc The (Special) Hartford
Swan Tool & Machine Co The Hartford
Torrington Manufacturing Co The (special rolling mill machinery) Torrington

Machinery
Fenn Manufacturing Company The (special) Newington
Globe Tapping Machine Company (dial type drilling and tapping) Bridgeport
Hallden Machine Company The (mill) Thomaston
Torrington Manufacturing Co The (mill) Torrington

Machinery—Automatic
Banthin Engineering Company (new and rebuilt) Bridgeport

Machinery—Bolt and Nut
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Cold Heading
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery Dealers & Rebuilders
Botwinik Brothers New Haven
J L Lucas and Son Fairfield
State Machinery Co Inc New Haven

Machinery—Extruding
Standard Machinery Co The Mystic

Machinery—Metal-Working
Fenn Mfg Co The Newington
Waterbury Farrel Foundry & Machine Co The Waterbury
Pratt & Whitney Co Inc West Hartford

Machinery—Nut
Waterbury Farrel Foundry & Machine Co The (forming and tapping) Waterbury

Machinery—Screw and Rivet
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Wire Drawing
Fenn Mfg Co The Newington
Waterbury Farrel Foundry & Machine Co The Waterbury

Machinery—Wire Straightening
Mettler Machine Tool Inc New Haven

Machines
Campbell Machine Div American Chain & Cable Co Inc (cutting & nibbling) Bridgeport
Coulter & McKenzie Machine Co The (special, new development engineering design and construction) Bridgeport
Patent Button Company The Waterbury

Machines—Automatic
A H Nilson Mach Co The (Special) Bridgeport

Machines—Automatic Chucking
Bullard Company The Bridgeport
New Britain-Gridley Machine Division The New Britain Machine Co (multiple spindle and double end) New Britain
Pratt & Whitney Co Inc (Potter & Johnson) West Hartford

Machines—Brushing
Fuller Brush Co The Hartford

Machines—Contin-U-Matic
Bullard Company The (verticle multi-spindle—continuous turning) Bridgeport

Machines—Draw Benches
Fenn Manufacturing Company The Newington

Machines—Forming
A H Nilson Mach Co The (four-slide wire and ribbon stock) Bridgeport

Machines—Paper Ruling
John McAdams & Sons Inc Norwalk

Machines—Pipe & Bolt Threading
Capewell Mfg Co The Hartford

Machines—Precision Boring
New Britain-Gridley Machine Division The New Britain Machine Co New Britain

Machines—Rolling
Fenn Manufacturing Company The Newington

Machines—Slotting
Globe Tapping Machine Company The (High Production Screw Head Slotting) Bridgeport
Waterbury Farrel Foundry & Machine Co The (screw head) Waterbury

Machines—Spacing Table
Bullard Company The Bridgeport

Machines—Special
Fenn Mfg Co The Newington
Fuller Brush Co The Hartford

Machines—Swaging
Fenn Manufacturing Company The Newington

Machines—Thread Rolling
Hartford Special Machinery Co The Hartford
Waterbury Farrel Foundry & Machine Co The Waterbury

Machines—Turks Head
Fenn Manufacturing Company The Newington

Machines—Well Drilling
Consolidated Industries West Cheshire

Machines—Wire Drawing
Fenn Manufacturing Company The Newington

Magnet Wire
Viking Wire Co Inc Danbury

Manganese Bronze Ingot
Whipple and Choate Company Bridgeport

Manicure Instruments
W E Bassett Company The Derby

Marine Engines
Kilborn-Sauer Company (running lights and searchlights) Fairfield
Lathrop Engine Co The Mystic

Marine Equipment
Russell Manufacturing Company The (utility cord and accessory hardware) Middletown
Wilcox-Crittenden Div North & Judd Mfg Co Middletown

Marine Reserve Gears
Snow-Nabstedt Gear Corp The New Haven

Marking Devises
Hoggson & Pettis Mfg Co The New Haven
Parker Stamp Works Inc The (steel) Hartford

Material Handling
Parsons Co Inc W A (tote pans) Durham

Mats—Newspaper
Lockwood Sons Inc Wm H Hartford

Mattresses
Waterbury Mattress Co Waterbury

Metal Boxes
Parsons Co Inc W A (tool kits) Durham

Metal Boxes and Displays
Durham Mfg Co The (Designing & Mfg to customers specifications) Durham
Merriam Mfg Co (Bond, Security, Cash, Utility, Personal Files, Drawer Safes, Custombilt containers and displays) Durham
Charles Parker Co (sheet metal fabricators) Meriden

Metal Cleaners
Apothecaries Hall Co Waterbury
Enthone Inc New Haven
Foy Electro-Chemical Co Ansonia
MacDermid Incorporated Waterbury

Metal Cleaning Machines
Colt's Manufacturing Company Hartford

Metal Finishes
Enthone Inc New Haven
Mitchell-Bradford Chemical Co Bridgeport
United Chromium Incorporated Waterbury

Metal Finishing
Hartford Industrial Finishing Co Hartford
National Sheradizing & Machine Co Hartford
Waterbury Plating Company Waterbury

Metal Formings
Master Engineering Company West Cheshire
Stanley Pressed Metal New Britain

Metal Mouldings
Leed Co The H A Hamden

Metalizing
Conn Metal Finishing Co Hamden

Metal Novelties
H C Cook Co The 32 Beaver St Ansonia

Metal Parts Washing Machines
Foy Electro-Chemical Co Ansonia

Metal Plating—Gold & Silver
Donham Craft Inc Thomaston

Metal Products—Stampings
American Brass Company The Waterbury
Plume & Atwood Manufacturing Co Thomaston
J H Sessions & Son Bristol
Scovill Manufacturing Company (Made-to-Order) Waterbury 91
Stanley Pressed Metal New Britain

Metal Specialties
Excelsior Hardware Co The Stamford

Metal Spinning
Moseley Metal Crafts Inc West Hartford

Metal Stampings
American Brass Company The Waterbury
Autoyre Co The (Small) Oakville
Better Formed Metals Inc Waterbury
DooVal Tool & Mfg Inc The Naugatuck
Excelsior Hardware Co The Stamford
Greist Mfg Co The 503 Blake St New Haven
H C Cook Co The 32 Beaver St Ansonia
Humason Mfg Co The Forestville
Mohawk Mfg Co (threaded) Middletown
J A Otterbein Company The (metal fabrications) Middletown
J H Sessions & Son Bristol
Patent Button Co The Waterbury
G E Prentice Mfg Co The Kensington
Plume & Atwood Mfg Co The Thomaston
Saling Manufacturing Company Unionville
Stanley Pressed Metal New Britain
Swan Tool & Machine Co The Hartford
Terryville Manufacturing Co Terryville
United States Rubber Company Shoe Hardware Division Waterbury
Verplex Company The (Contract) Essex
Waterbury Lock & Specialty Co The Milford

Meters
Standard Meter Repair Co The Shelton

Meters—Gas
Sprague Meter Company Bridgeport

Meters—Parking
Rhodes Inc M H Hartford

Microfilming
American Microfilming Service Company New Haven

Milk Bottle Carriers
John P Smith Co The 423-33 Chapel St New Haven

Milling Machines
Pratt & Whitney Co Inc (Keller Tracer—Controlled Milling Machines) West Hartford
Rowbottom Machine Company Inc (cam) Waterbury

Mill Products
Scovill Manufacturing Company (aluminum, brass, bronze, nickel silver—sheet, rod, wire, tube) Waterbury

Mill Supplies
Wilcox-Crittenden Div North & Judd Mfg Co Middletown

Millwork
Hartford Builders Finish Co Hartford

Miniature Precision Connectors
Gorn Electric Co Stamford

Minute Minders
Lux Clock Mfg Co The Waterbury

Mirror Rosettes and Hangers
Waterbury Companies Inc Waterbury

Mixing Equipment
Eastern Industries Inc New Haven
Gabb Special Products Div The E Horton & Son Co Windsor Locks

Model Work
B & N Tool & Engineering Co (instruments and timing devices) Oakville

Mops
Fuller Brush Co The Hartford

Motor Control Centers
Distribution Assemblies Department, General Electric Co Plainville

Motor—Generator Sets
Electric Specialty Co Stamford

Motors—Electric Timing
Cramer Co Inc The R W Centerbrook

Motors—Synchronous
Cramer Co Inc The R W Centerbrook
Electric Specialty Co Stamford

Moulded Plastic Products
Butterfield Inc T F Naugatuck
Colt's Manufacturing Company Hartford
Patent Button Co The Waterbury
Waterbury Companies Inc Waterbury
Watertown Mfg Co The 117 Echo Lake Road Watertown

Mouldings
Himmel Brothers Co The (architectural, metal and store front) Hamden

Moulds
ABA Tool & Die Co Manchester
Hoggson & Pettis Mfg Co The (steel) 114 Brewery St New Haven
Parker Stamp Works Inc The (compression injection & transfer for plastics) Hartford

Napper Clothing
Standard Card Clothing Co The (for textile mills) Stafford Springs

Nettings
Wilcox Lace Corp The Middletown

Newspaper Mats
Lockwood Sons Inc Wm H Hartford

Nickel Anodes
Apothecaries Hall Co Waterbury

Nickel Silver
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Plume & Atwood Mfg Co The Thomaston
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheet, strip) New Haven

Nickel Silver Ingot
Whipple and Choate Company The Bridgeport

Night Latches
Sargent & Company New Haven
Yale & Towne Mfg Co Inc Stamford

Non-ferrous Metal Castings
Miller Company The Meriden
Charles Parker Co Meriden

Nuts, Bolts and Washers
Clark Brothers Bolt Co Milldale

Office Equipment
Pitney-Bowes Inc Stamford
Underwood Corporation Bridgeport & Hartford

Offset Printing
Kellogg & Bulkeley A Division of Connecticut Printers Inc Hartford

Oil Burners
Miller Company The (domestic) Meriden
Peabody Engineering Corp (Mechanical and/or Steam Atomizer) Stamford
Silent Glow Oil Burner Corp The 1477 Park St Hartford

Oil Tanks
Norwalk Tank Co The (550 to 30M gals, underwriters above and under ground) South Norwalk
Whitlock Manufacturing Co The Hartford

Oils—Cutting
Anderson Oil Co Inc F E Portland

Open Knife Switches and Accessories
Trumbull Components Department, General Electric Co Plainville

Optical Cores & Ingots
Plume & Atwood Mfg Co The Thomaston

Otis Woven Awning Stripes
The Falls Company Norwich

Ovens—Electric
Bauer & Company Inc Hartford

Overhead Garage Doors
Wallingford Planing Mill Co Inc Yalesville

Package Sealers
Better Packages Inc Shelton

Packaging Machinery
Colt's Manufacturing Company (box making machinery, Trade mark "Rite Size") Hartford

Packaging & Packing
Mercer & Stewart Co The Hartford

Packing
Auburn Manufacturing Company The (leather, rubber, asbestos, fibre) Middletown
Raybestos Division of Raybestos-Manhattan Inc (Asbestos and Rubber Sheet) Bridgeport

Padlocks
Sargent & Company New Haven
Waterbury Lock & Specialty Co The Milford
Yale & Towne Mfg Co Inc Stamford

Pads—Office
The Baker Goodyear Company New Haven

Paints and Enamels
Staminate Corp The New Haven

Panelboards—Lighting and Distribution
Distribution Assemblies Department, General Electric Co Plainville

Panelyte
Leed Co The H A Hamden

Panta
Moore Special Tool Co (crush wheel dresser) Bridgeport

Paperboard
Federal Paper Board Co Inc Montville, New Haven & Versailles
Gair Company Inc Robert Montville
Robertson Paper Box Co Montville
New Haven Pulp and Board Co The New Haven

Paper Box—Partitions
American Rondo Corporation (specialty partitions) Hamden

Paper Boxes
Atlantic Carton Corp (folding) Norwich
Gair Co Inc Robert (folding) Montville
National Folding Box Co Inc (folding) New Haven & Versaille
New Haven Board and Carton Co The New Haven
Mills Inc H J Bristol
Robertson Paper Box Co (folding) Montville

Paper Boxes—Folding and Setup
Bridgeport Paper Box Company Bridgeport
M Backes' Sons Inc Wallingford

Paper Clips
H C Cook Co The (steel) 32 Beaver St Ansonia

Paper Mill Machinery
Farrel-Birmingham Company Inc Ansonia

Paper Tags and Pin Tickets
Waterbury Tag Company The Waterbury

Paper Tubes and Cores
Sonoco Products Co (Climax-Lowell) Div Mystic

Parachute Cord
Essex Mills Inc Essex

Parallel Tubes
Sonoco Products Co (Climax-Lowell) Div Mystic

Parkerizing
Clairglow Mfg Company Portland

Parking Meters
Rhodes Inc M H Hartford

Parts
Scovill Manufacturing Company (ammunition, electric instrument, electrical appliance, fountain pen, instrument, lighting fixture, ordance, etc.—blanked, stamped, formed, drawn, re-drawn, forged, screw machined, headed, pointed, finished) Waterbury

Passenger Car Sander
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Pattern-Makers
Farrel-Birmingham Company Inc Ansonia

Penlights
Bridgeport Metal Goods Mfg Co Bridgeport

Pet Furnishings
Andrew B Hendrix Co The New Haven

Phosphor Bronze
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Miller Company The (sheets, strips, rolls) Meriden
Seymour Mfg Co The Seymour
Waterbury Rolling Mills Inc (sheets, strips, rolls) Waterbury
Western Brass Mills Div Olin Mathieson Chemical Corp (sheet, strip) New Haven

Phosphor Bronze Ingots
Whipple and Choate Company The Bridgeport

Photoflash Batteries
Electrical Div Olin Mathieson Chemical Corp New Haven

Photographic Equipment
Electrical Div Olin Mathieson Chemical Corp New Haven
Kalart Company Inc Plainville

Piano Repairs
Pratt Read & Co Inc (keys and action) Ivoryton

Piano Supplies
Pratt Read & Co (keys and actions, backs, plates) Ivoryton

Pins
CEM Company ("Spirol") Danielson

Pin Up Lamps
Verplex Company The Essex

Pipe
American Brass Co The (brass and copper) Waterbury
Bridgeport Brass Co (brass and Copper) Bridgeport
Chase Brass & Copper Co (red brass and copper) Waterbury
Howard Co (cement well and chimney) New Haven

Pipe Fitters Hand Tools & Pipe Threading Machines
Capewell Manufacturing Company Hartford

Pipe Fittings
Corley Co Inc Plainville
Malleable Iron Fittings Co Branford

Pipe Plugs
Holo-Krome Screw Corporation The (countersunk) West Hartford

Pipe Plugs—Socketed
Holo-Krome Screw Corp The West Hartford

Plastic Coatings
Bischoff Chemical Corporation (Peelable Plastic Coatings) Ivoryton

Plastic Buttons
Frank Parizek Manufacturing Co The West Willington
Patent Button Co The Waterbury

Plastic Gems
Colt's Manufacturing Company Hartford

Plastic Lining Equipment
Comco Inc Div of Enthone Inc New Haven

Plastic Materials
American Cyanamid Co (Molding Compounds, Adhesives, Laminating Resins) Wallingford

Plastic Pipe and Fittings
Comco Inc Div of Enthone Inc New Haven

Plastic Molders
Plastic Molding Corporation Sandy Hook

Plastic Molding
Butterfield Inc T F Naugatuck
U S Plastic Molding Corporation Wallingford

Plastic—Moulders
Colt's Manufacturing Company Hartford
Conn Plastics Waterbury
Waterbury Companies Inc Waterbury
Watertown Mfg Co The Watertown

Plastic Printing Plates
Lockwood Sons Inc Wm H Hartford

Plastic Wire Coating Materials
Electronic Rubber Co Stamford

Plastics
B F Goodrich Sponge Products Division Shelton
Humphrey Fabricating Corp (laminated, fabricated parts) Unionville
Naugatuck Chemical Division Unitel States Rubber Co Naugatuck

IT'S MADE IN CONNECTICUT

Plastics Machinery
Black Rock Mfg Company The — Bridgeport
Farrel-Birmingham Company Inc — Ansonia

Plastics Plated—Gold & Silver
Donham Craft Inc — Thomaston

Plastics—Moulds & Dies
Crown Tool & Die Co Inc — Bridgeport
Parker Stamp Works Inc The (for plastics) — Hartford

Plasticrete Bloc
Plasticrete Corp — Hamden

Platers
Acme Chromium Plating Co — New Haven
Christie Plating Co — Groton
City Plating Works — Bridgeport
Patent Button Co The — Waterbury
Water Plating Company — Waterbury
Chromium Process Company The (Chromium Plating only) — Derby

Platers' Equipment
Apothecaries Hall Company — Waterbury
Comco Inc Div of Enthone Inc — New Haven
Foy Electro-Chemical Co — Ansonia
Lea Manufacturing Co The — Waterbury
MacDermid Incorporated — Waterbury

Platers Metal
Plume & Atwood Mfg Co The — Thomaston

Plating
Christie Plating Co The (including lead plating) — Groton
Conn Metal Finishing Co — Hamden
Superior Plating Co — Bridgeport

Plating on Metals & Plastics
Donham Craft Inc — Thomaston

Plating Processes and Supplies
Enthone Inc — New Haven
United Chromium Incorporated — Waterbury

Plumbers' Brass Goods
Bridgeport Brass Co — Bridgeport
Keeney Mfg Co The (special bends) — Newington
Scovill Manufacturing Company — Waterbury 48

Plumbing Specialties
Risdon Manufacturing Co John M Russell Div — Naugatuck

Pneumatic Machinery
Bourne Tool & Die Co (built, designed & tooled) — Watertown

Pole Line Hardware
Malleable Iron Fittings Co — Branford

Police Equipment
The Smith-Worthington Saddlery Co — Hartford

Polishing
Mirror Polishing & Buffing Co — Waterbury

Polishing & Buffing
General Polishing & Buffing — Bridgeport

Poly Chokes
Poly Choke Company The (a shotgun choking device) — Tarriffville

Postage Meters
Pitney Bowes Inc — Stamford

Potentiometers—Electronic
Bristol Company The — Waterbury

Power Rollers
Consolidated Industries Inc — West Cheshire

Precision Electronic Chassis
Saybrook Manufacturing Inc — Old Saybrook

Precision Machine Tool Spindles
Whitnon Manufacturing Co (for milling, grinding, boring & drilling) — Farmington

Precision Manufacturing
Newton Co The (aircraft parts) — Manchester

Precision Revolving Machinery
Whitnon Manufacturing Co — Farmington

Precision Springs & Wire Forms
Rowley Spring Co Inc The — Bristol

Prefabricated Buildings
City Lumber of Bridgeport Inc The — Bridgeport

Premium Specialties
Waterbury Companies Inc — Waterbury

Preservatives—Wood, Rope, Fabric
Darworth Incorporated ("Cuprinol") ("Cellu-san") — Simsbury

Press Papers
Case Brothers Inc — Manchester

Presses
Farrel-Birmingham Company Inc (Hydraulic) — Ansonia

Presses—Molding
Standard Machinery Co The (compression and transfer molding, automatic and semi-automatic) — Mystic

Presses—Power
Pneumatic Applications Co The (modernization of presses through conversion to Wichita Air Clutch operation) — Simsbury
Waterbury Farrel Foundry & Machine Co The — Waterbury

Pressure Vessels
Norwalk Tank Co Inc The (unfired to ASME Code Par U 69-70) — South Norwalk
Whitlock Manufacturing Co The — Hartford

Printing
Bussmann Press Inc — New Haven
Case Lockwood & Brainard A Division of Connecticut Printers Inc — Hartford
Finlay Brothers — Hartford
Heminway Corporation The — Waterbury
Hildreth Press — Bristol
Hunter Press — Hartford
Lehman Brothers Inc — New Haven
Taylor & Greenough Co The — Wethersfield
T B Simonds Inc — Hartford
A D Steinbach & Sons — New Haven
The Walker-Rackliff Company — New Haven

Printing Machinery
Banthin Engineering Co (automatic) — Bridgeport
Thomas W Hall Company — Stamford

Printing Plates
Lockwood Sons Inc Wm H — Hartford

Printing Rollers
Chambers-Storck Company Inc The (engraved) — Norwich

Production Control Equipment
Ripley Company Inc — Middletown

Production Welding
Consolidated Industries — West Cheshire

Profilers
Pratt & Whitney Co Inc — West Hartford

Propellers—Aircraft
Hamilton Standard Div United Aircraft Corp (propellers and other aircraft equipment) — Windsor Locks

Protective Coatings
Bischoff Chemical Corporation (Peelable Plastic Coatings) — Ivoryton
Harrison Company The A S (Waxes) — South Norwalk

Publishers
O'Toole & Sons Inc The — Stamford

Pumps
Yale & Towne Mfg Co The — Stamford

Pumps—Small Industrial
Eastern Industries Inc — New Haven

Pump Valves
Colt's Manufacturing Company — Hartford

Punches
Hoggson & Pettis Mfg Co The (ticket & cloth) 141 Brewery St — New Haven

Putty Softeners—Electrical
Fletcher Terry Co The — Box 415 Forestville

Pyrometers
Bristol Co The (recording and controlling) — Waterbury

Radiation—Finned Copper
Bush Manufacturing Co — West Hartford
G & O Manufacturing Company The — New Haven
Vulcan Radiator Co The (steel and copper) — Hartford

Radiators—Engine Cooling
G & O Manufacturing Co — New Haven

Ratchet Offset Screw Driver
Chapman Co J W — Durham

Rayon Staple Fiber
Hartford Rayon Corp The — Rocky Hill

Reamers
Pratt & Whitney Co Inc (All types) — West Hartford

Recorders
Bristol Co The (automatic controllers, temperature, pressure, flow, humidty) — Waterbury

Reduction Gears
Farrel-Birmingham Company Inc — Ansonia
Snow-Nabstedt Gear Corp The — New Haven

Refractories
Howard Company — New Haven
Mullite Refractories Company The — Shelton

Refrigeration
Bowser Techanical Refrigeration Div Bowser Inc (high altitude, low temperature) — Terryville
Bush Manufacturing Co The — West Hartford

Regulators
Norwalk Valve Company (for gas and air) — South Norwalk
Sorensen & Company Inc — Stamford

Research & Development
Raymond Engineering Laboratories (Electro-Mechanical) — Middletown

Resistance Wire
C O Jeliff Mfg Co The (nickel chromium, copper nickel, iron chromium, aluminum) — Southport
Kanthal Corporation The — Stamford

Respirators
American Optical Company Safety Products Division — Putnam

Retainers
Hartford Steel Ball Co The (bicycle & automotive) — Hartford

Riveting Machines
Grant Mfg & Machine Co The — Bridgeport
Ripley Company Inc — Middletown
H P Townsend Manufacturing Co The — Elmwood

Rivets
Blake & Johnson Co The (brass, copper and non-ferrous) — Waterville
Clark Brothers Bolt Co — Milldale
Plume & Atwood Mfg Co The — Thomaston
Raybestos Div of Raybestos-Manhattan Inc The (brass and aluminum tubular and solid copper) — Bridgeport
Raybestos Div of Raybestos-Manhattan Inc The (iron) — Bridgeport

Rods
American Brass Company The (copper, brass, bronze) — Waterbury
Bridgeport Brass Company — Bridgeport
Bristol Brass Corp The (brass and bronze) — Bristol
Scovill Manufacturing Company (aluminum, brass, bronze, etc.) — Waterbury

Rollers—Bituminous Paving
Gabb Special Products Div E Horton & Son Company — Windsor Locks

Roller Skate Wheels
Raybestos Division of Raybestos-Manhattan Inc — Bridgeport

Roller Skates
Arms and Ammunition Div Olin Mathieson Chemical Corp — New Haven

Rolling Mills & Equipment
Farrel-Birmingham Company Inc — Ansonia
Fenn Mfg Co The — Newington
Precision Methods & Machines Inc — Waterbury
Waterbury Farrel Foundry & Machine Co The — Waterbury

Rolls
Farrel-Birmingham Company Inc (Chilled and Alloy Iron, Steel) — Ansonia

Rope Wire
American Steel & Wire Div of U S Steel — New Haven

Rubber—Cellular
B F Goodrich Sponge Products Division — Shelton

Rubber Chemicals
Naugatuck Chemical Division United States Rubber Co — Naugatuck
Stamford Rubber Supply Co The ("Factice" Vulcanized Vegetable Oils) — Stamford

Rubber Cutting Machinery
Black Rock Mfg Company The — Bridgeport

Rubberized Fabrics
Duro-Gloss Rubber Co The — New Haven

Rubber Footwear
Goodyear Rubber Co The — Middletown

Rubber Gloves
Seamless Rubber Company The — New Haven

Rubber—Handmade Specialties
Seamless Rubber Company The New Haven

Rubber Latex Compounds and Dispersions
Naugatuck Chemical Division United States Rubber Co (coating, impregnating and adhesive compounds) Naugatuck

Rubber—Latex Foam
B F Goodrich Sponge Products Division Shelton

Rubber Mill Machinery
Farrel-Birmingham Company Inc Ansonia

Rubber—Molded Specialties
Airex Rubber Prod Corp Portland
Canfield Co The H O Bridgeport
Seamless Rubber Company The New Haven

Rubber Products
Airex Rubber Prod Corp Portland

Rubber Printing Plates
Lockwood Sons Inc Wm H Hartford

Rubber Products—Mechanical
Auburn Manufacturing Company The (washers, gaskets, molded parts) Middletown
Canfield Co The H O Bridgeport
Seamless Rubber Company The New Haven

Rubber—Reclaimed
Naugatuck Chemical Division United States Rubber Co Naugatuck

Rubbers
Naugatuck Chemical Div U S Rubber Co (special synthetic) Naugatuck

Rubbish Burners
John P Smith Co The 423-33 Chapel St New Haven

Rust Preventives
Anderson Oil Co Inc F E Portland
Enthone Inc New Haven

Rust Removers
Enthone Inc New Haven

Saddlery
The Smith-Worthington Saddlery Co Hartford

Safety Clothing
American Optical Company Safety Products Division Putnam

Safety Fuses
Ensign-Bickford Co The (mining & detonating) Simsbury

Safety Gloves and Mittens
American Optical Company Safety Products Division Putnam

Safety Goggles
American Optical Company Safety Products Division Putnam

Safety Switches
Trumbull Components Department, General Electric Co Plainville

Saw Blades—Hack
Capewell Mfg Co The Hartford

Saw Blades—Hack & Band
Capewell Manufacturing Company Hartford

Saws, Band, Metal Cutting
Atlantic Saw Mfg Co New Haven

Scissors
Acme Shear Company The Bridgeport

Screens
Hartford Wire Works Co The (Windows, Doors and Porches) Hartford

Screw Caps
Weimann Bros Mfg Co The (small for bottles) Derby

Screw Machines
H P Townsend Mfg Company The Elmwood

Screw Machine Products
Apex Tool Co Inc The Bridgeport
Blake & Johnson Co The Waterville
Consolidated Industries West Cheshire
Dependable Automatic Screw Co Waterbury
Eastern Machine Screw Corp The Truman & Barclay Sts New Haven
Fairchild Screw Products Inc Winsted
Franklin Screw Machine Co The (up to 1½" capacity) Hartford
Garthwait Mfg Co A E (up to and incl ½") Waterbury
Greist Mfg Co The (Up to 1½" capacity) New Haven
Horberg Grinding Industries Inc (Heat treated and ground type only) 19 Staples Street Bridgeport
Humason Mfg Co The Forestville
Junior Screw Machine Products Inc West Haven
Kerrin Company West Haven
Lowe Mfg Co The Wethersfield

Screw Machine Products (Cont.)
National Automatic Products Company The Berlin
Nelson's Screw Machine Products Plantsville
New Britain Machine Company The New Britain
New Haven Screw Machine Prods Inc (up to 1½" capacity) Milford
Olson Brothers Company (up to ¾" capacity) Plainville
Olson & Sons R P Southington
Peck Spring Co The Plainville
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company Waterbury 91
United Screw Machine Co Thomaston
Waterbury Machine Tools & Products Co (Brown & Sharpe and Davenport) Waterbury

Screw Machine Tools
American Cam Company Inc (Circular Form Tools) Hartford
Pratt & Whitney Co Inc (Reamers, Taps, Dies, Blades and Knurls) West Hartford
Somma Tool Co (precision circular form tools) Waterbury

Screws
American Screw Company Willimantic
Atlantic Screw Works (wood) Hartford
Blake & Johnson Co The (machine and wood) Waterville
Bristol Company The (socket set and socket cap screws) Waterbury
Clark Brothers Bolt Co Milldale
Eagle Lock Co The Terryville
Holo-Krome Screw Corporation The (socket set and socket cap) West Hartford
Scovill Manufacturing Company Waterbury 91
Superior Manufacturing Co The Winsted

Screws—Socket
Allen Manufacturing Company The Hartford
Bristol Co The Waterbury
Holo-Krome Screw Corp The West Hartford

Sealing Tape Machines
Better Packages Inc Shelton

Service Entrance Equipment
Trumbull Components Department, General Electric Co Plainville

Sewing Machines
Greist Mfg Co The (Sewing Machine attachments) 503 Blake St New Haven
Merrow Machine Co The (Industrial) Hartford
Singer Manufacturing Company The (industrial) Bridgeport

Shaving Soaps
J B Williams Co The Glastonbury

Shears
Acme Shear Co The (household) Bridgeport

Sheet Metal Products
American Brass Co The (brass and copper) Waterbury
Dresser Products Inc (Fabricators) Canaan
Merriam Mfg Co (security boxes, fitted tool boxes, tackle boxes, displays) Durham
Charles Parker Co (sheet metal fabricators) Meriden
Parsons Co Inc W A (fabricators) Durham
Plume & Atwood Mfg Co The Thomaston
United Manufacturing Co Division of The W L Maxson Corp Hamden

Sheet Metal Stampings
American Brass Company The Waterbury
American Buckle Co The West Haven
DooVal Tool & Mfg Inc The Naugatuck
Dresser Products Inc Canaan
J H Sessions & Son Bristol
Patent Button Co The Waterbury
Plume & Atwood Mfg Co The Thomaston
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys) Waterbury

Shells
Scovill Manufacturing Company (aluminum, brass, bronze, copper, nickel silver—drawn, stamped—electric socket, screw) Waterbury
Wolcott Tool and Manufacturing Company Inc Waterbury

Shipment Sealers
Better Packages Inc Shelton

Showcase Lighting Equipment
Wiremold Company The Hartford

Signals
H C Cook Co The (for card files) 32 Beaver St Ansonia

Signs
Berger Sign Co (neon electric-porcelain enamel-stainless steel) Hartford

Silk Screen Process Printing
Norton Co B H New Haven

Silk Screen Printing
Sirocco Screenprints New Haven

Silk Screening on Metal
Merriam Mfg Co (Displays and Specialties, to order) Durham

Silver & Gold Plating
Donham Craft Inc (on metals & plastics) Thomaston

Simulators
Reflectone Corporation The Stamford

Sintered Metal Products
Raybestos Division of Raybestos-Manhattan Inc Bridgeport

Sizing and Finishing Compounds
American Cyanamid Company Waterbury

Slide Fasteners
G E Prentice Mfg Co The Kensington
North & Judd Manufacturing Co New Britain
Scovill Manufacturing Company (GRIPPER zippers) Waterbury

Slings
American Steel & Wire Div of U. S. Steel New Haven

Smoke Stacks
Bigelow Company The (steel) New Haven
Norwalk Tank Co The South Norwalk

Snap Fasteners
Scovill Manufacturing Company (GRIPPER snap fasteners) Waterbury

Soap
J B Williams Co The (industrial soaps, toilet soaps, shaving soaps) Glastonbury

Special Machinery
Banthin Engineering Company (complete and/or parts) Bridgeport
Boesch Mfg Co Inc Danbury
Black Rock Mfg Company The Bridgeport
Farrel-Birmingham Company Inc Ansonia
Federal Machine & Tool Co Bristol
Fenn Mfg Co The Newington
H P Townsend Mfg Company The Elmwood
National Sheradizing & Machine Co (mandrels & stock shells for rubber industry) Hartford
Swan Tool & Machine Co The Hartford

Special Parts
Fenn Mfg Co The Newington
Greist Mfg Co The (small machines, especially precision stampings) New Haven
J H Sessions & Son Bristol

Spinnings
Gray Manufacturing Company The Hartford

Spline Milling Machines
Townsend Mfg Co The H P Elmwood

Sponge Rubber
B F Goodrich Sponge Products Division Shelton

Spotwelding
Spotwelders Inc (aluminum, steel, magnesium, titanium & alloys) Stratford

Spray Painting Equipment and Supplies
Lea Manufacturing Co The Waterbury

Spring Coiling Machines
Torrington Manufacturing Co The Torrington

Spring Presses
Townsend Mfg Co The H P Elmwood

Spring Units
Owen Silent Spring Division American Chain & Cable Company Inc Bridgeport

Spring Washers
Barnes Co The Wallace Div Associated Spring Corp Bristol

Springs—Coil & Flat
Barnes Co The Wallace Div Associated Spring Corp Bristol
Barrett Co William L Bristol
Bristol Spring Manufacturing Co Plainville
Foursome Manufacturing Co Bristol
Humason Mfg Co The Forestville
Newcomb Spring Corp The Southington
New England Spring Manufacturing Company Unionville
Peck Spring Co The Plainville

Springs—Flat
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Foursome Manufacturing Co Bristol
Humason Mfg Co The Forestville

Springs—Furniture
Owen Silent Spring Division American Chain & Cable Company Inc Bridgeport

Springs—Wire
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Colonial Spring Corporation The Hartford
Connecticut Spring Corporation The (compression, extension, torsion) Hartford
Foursome Manufacturing Co Bristol
Humason Mfg Co The Forestville
D R Templeman Co (coil and torsion) Plainville
J W Bernston Company (coil and torsion) Plainville
Newcomb Spring Corp The Southington

Springs, Wire & Flat
Autoyre Company The Oakville

Sprinklers
Scovill Manufacturing Company (GREEN SPOT) Waterbury

Stamped Metal Products
American Brass Company The Waterbury

Stampings
C & H Mfg Co Inc Watertown
Donahue Mfg Co Inc Watertown
DooVal Tool & Mfg Inc The Naugatuck
Foursome Manufacturing Co Bristol
Plume & Atwood Mfg Co The (small) Thomaston
Saybrook Manufacturing Inc Old Saybrook
Scovill Manufacturing Company aluminum, brass, bronze, copper, nickel silver, steel and other metals and alloys—automotive, electrical, radio, etc.—deep drawn, enameled) Waterbury
Stanley Pressed Metal New Britain

Stampings—Small
Acme Shear Co The Bridgeport
Barnes Co The Wallace Div Associated Spring Corp Bristol
Barrett Co William L Bristol
Bristol Spring Manufacturing Co Plainville
Greist Manufacturing Co The New Haven
Humason Mfg Co The Forestville

Stamps
Hoggson & Pettis Mfg Co The (steel) 141 Brewery St New Haven
Parker Stamp Works Inc The (steel) Hartford

Stationery Specialties
American Brass Company The Waterbury

Steel
Stanley Works The (cold rolled strip) New Britain

Steel Castings
Farrel-Birmingham Company Inc Ansonia
Hartford Electric Steel Corp The (Carbon, low alloy and stainless steel and Ductile iron) Hartford
Malleable Iron Fittings Co Branford
Nutmeg Crucible Steel Co Branford

Steel—Cold Rolled Spring
Barnes Co The Wallace Div Associated Spring Corp Bristol

Steel—Cold Rolled Stainless
Ulbrich Stainless Steels Wallingford
Wallingford Steel Company Wallingford

Steel—Cold Rolled Strip and Sheets
American Steel & Wire Div of U S Steel New Haven
Detroit Steel Corporation New Haven
Wallingford Steel Company Wallingford

Steel Goods
Merriam Mfg Co (sheets products to order)

Steel—Hot Rolled Strip
Northeastern Steel Corp Bridgeport

Steel Rolling Rules
Waterbury Lock & Specialty Co The Milford

Steel Strapping
Stanley Works The New Britain

Stereotypes
New Haven Electrotype Div Electrographic Corp New Haven

Stop Clocks, Electric
H C Thompson Clock Co The Bristol

Storage Batteries
R A E Storage Battery Mfg Co Glastonbury

Straps, Leather
Auburn Manufacturing Company The (textile, industrial, skate, carriage) Middletown

Structural Mouldings
Leed Co The H A Hamden

Studio Couches
Waterbury Mattress Co Waterbury

Super Refractories
Mullite Refractories Company The Shelton

Surface Metal Raceway & Fittings
Wiremold Company The Hartford

Surgical Dressings
Acme Cotton Products Co Inc East Killingly
Seamless Rubber Company The New Haven

Surgical Rubber Goods
Seamless Rubber Company The New Haven

Swaging Machinery
Fenn Mfg Co The Newington
Hartford Special Machinery Co The Hartford

Switchboards
Distribution Assemblies Department, General Electric Co Plainville

Switchboards Wire and Cables
Rockbestos Products Corp (asbestos insulated) New Haven

Switches—Electric
General Electric Company Bridgeport

Synthetic Resins
American Cyanamid Co (Textile Resins, Paper Resins) Waterbury

Tabulating Equipment—Manual
Denominator Company Inc Woodbury
Veeder-Root Incorporated Hartford

Tags
Waterbury Tag Company The (Paper and Cloth) Waterbury

Tanks
Bigelow Company The (steel) New Haven
Comco Inc Div of Enthone Inc (steel, alloy and lined) New Haven
Connecticut Welders Inc (steel, alloy & lined) Wallingford
Foy Electro-Chemical Co (Metal & Plastic) Ansonia
Norwalk Tank Co The South Norwalk
Rolock Inc (Alloy) Fairfield
Storts Welding Company (steel and alloy) Meriden

Tap Extractors
Walton Company The West Hartford

Tape
Russell Manufacturing Company The (woven cotton and woven glass tape) Middletown

Tapes—Industrial Pressure Sensitive
Seamless Rubber Company The New Haven

Tape Recorders
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Tape Recorder Magazines
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Taps
Pratt & Whitney Co Inc West Hartford

Tarred Lines
Brownell & Co Inc Moodus

Telemetering Instruments
Bristol Co The Waterbury

Telephone Answering & Recording Machines
Conn Telephone & Electric Corp Subsidiary of Great American Industries Inc Meriden

Television—Radio
Junior Screw Machine Products Inc West Haven

Testers-Insulation
McNeal J D New Haven

Testers—Insulation Wire & Cable
Davis Electric Company Wallingford

Testers—Non-Destructive
Sperry Products Inc Danbury

Textile Machinery
Merrow Machine Co The 2814 Laurel St Hartford

Textile Printing Gums
Polymer Industries Inc Springdale

Textile Processors
American Dyeing Corporation (rayon, acetate, nylon, dacron, other synthetics) Rockville

Thermometers
Bristol Co The (recording and automatic control) Waterbury
Manning Maxwell & Moore Inc Stratford

Thermostats
Bridgeport Thermostat Company Inc (automatic) Bridgeport

Thin Gauge Metals
Plume & Atwood Mfg Co The Thomaston
Thinsheet Metals Co The (plain or tinned in rolls) Waterbury

Thread
American Thread Co The Willimantic
Belding Heminway Corticelli Putnam
Max Pollack & Co Inc Groton and Willimantic
Wm Johl Manufacturing Co Mystic

Thread Chasers
Geometric Tool Division, Greenfield Tap & Die Corp New Haven

Thread Gages
Pratt & Whitney Co Inc West Hartford

Thread Milling Machines
Pratt & Whitney Co Inc West Hartford

Thread Rolling Machinery
Hartford Special Machinery Co The Hartford

Threading Machines
Grant Mfg & Machine Co The (double and automatic) Bridgeport

Timers, Interval
A W Haydon Co The Waterbury
H C Thompson Clock Co The Bristol
R W Cramer Company Inc The Centerbrook
Rhodes Inc M H Hartford

Timing Devices
B & N Tool & Engineering Co (development and model work) Oakville
R W Cramer Company Inc The Centerbrook
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
Rhodes Inc M H Hartford
Seth Thomas Clocks Thomaston
United States Time Corporation The Waterbury

Timing Devices & Time Switches
A W Haydon Co The Waterbury
Lux Clock Manufacturing Company Waterbury
M H Rhodes Inc Hartford

Tinning
Thinsheet Metals Co The (non-ferrous metals in rolls) Waterbury
Wilcox-Crittenden Div North & Judd Mfg Co Middletown

Tokens
Scovill Manufacturing Company (bus, street car and subway fare) Waterbury

Tool Chests
Vanderman Manufacturing Co The Willimantic

Tool Hardening
Commercial Metal Treating Co Bridgeport

Tools
B & N Tool & Engineering Co (dies, jigs, fixtures, sub-press and progressive) Oakville
Hoggson & Pettis Mfg Co The (rubber workers) 141 Brewery St New Haven

Tools & Dies
C & H Mfg Co Inc Watertown
Lambro Tool-Die & Mfg Co Bridgeport
Metropolitan Tool & Die Hartford
Moore Special Tool Co Bridgeport
Swan Tool & Machine Co The Hartford

Tools, Dies & Fixtures
Greist Mfg Co The New Haven

Tools, Dies, Jigs & Fixtures
O.S.A. Manufacturing Co Plainville
Otterbein Co J A Middletown
Riverside Mfg Co Inc The New Haven
Telke Tool & Die Mfg Co New Britain

Tools, Fixtures, Gauges
Fredericks Tool Co J F West Hartford

Toroidal Winding Machines
Boesch Mfg Co Inc Danbury

Totalizers
Reflectone Corporation The Stamford

Toys
Geo S Scott Mfg Co The Wallingford
Gong Bell Co The East Hampton
N N Hill Brass Co The East Hampton
Waterbury Companies Inc Waterbury

Tramways
American Steel & Wire Div of U S Steel New Haven

Transformers
Berkshire Transformer Corp The New Milford
Dano Electric Company Winsted

Trucks—Commercial
Metropolitan Body Company (International Harvester truck chasis and "Metro" bodies) Bridgeport

Trucks—Industrial
George P Clark Co Windsor Locks

Truck—Lift
Excelsior Hardware Co The Stamford
George P Clark Co Windsor Locks

Trucks—Skid Platforms
Excelsior Hardware Co The (lift) Stamford

Tube Bending
Donahue Mfg Co Inc Watertown

Tube Clips
H C Cook Co The (for collapsible tubes) 32 Beaver St Ansonia
Weimann Bros Mfg Co The (for collapsible tubes) Derby

Tube Fittings
Scovill Manufacturing Company (UNIFLARE flared tube and LOXIT compression tube) Waterbury

Tubers
Standard Machinery Co The (tubers for both rubber and plastic industries) Mystic

Tubes—Collapsible Metal
Sheffield Tube Corp The New London (Advt.)

Tubing
American Brass Co The (brass and copper) Waterbury
Bridgeport Brass Company (brass and copper) Bridgeport
G & O Manufacturing Co (finned) New Haven
Scoville Manufacturing Company (Brass and Copper) Waterbury 91

Tubing—Flexible Metallic
American Brass Co Metal Hose Branch Waterbury

Tubing—Heat Exchanger
American Brass Company The Waterbury
Scovill Manufacturing Company Waterbury 91

Tumbling Barrels
Henderson Bros Co The Waterbury

Tumbling Equipment & Supplies
Esbec Barrel Finishing Corp Beyram
Foy Electro-Chemical Co Ansonia

Tumbling Service
Esbec Barrel Finishing Corp Meriden

Typewriters
Royal Typewriter Co Inc Hartford
Underwood Corporation Hartford

Typewriters—Portable
Royal Typewriter Company Inc Hartford
Underwood Corporation Hartford

Typewriter Ribbons and Supplies
Royal Typewriter Company Inc Hartford
Underwood Corporation Hartford and Bridgeport

Ultrasonic Processing Equipment
General Ultrasonics Co The Hartford

Underclearer Rolls
Sonoco Products Co (Climax-Lowell Div) Mystic

Vacuum Bottles and Containers
American Thermos Bottle Co Norwich

Vacuum Cleaners
Electrolux Corporation Old Greenwich
Spencer Turbine Co The Hartford

Valve Discs
Colt's Manufacturing Company Hartford

Valves—Automobile Tire
Bridgeport Brass Company Bridgeport

Valves
Norwalk Valve Company (sensitive check valves) South Norwalk

Valves—Radiator Air
Bridgeport Brass Company Bridgeport

Valves—Relief & Control
Beaton & Caldwell Mfg Co New Britain

Valves—Safety & Relief
Manning Maxwell & Moore Inc Stratford

Vanity Boxes
Bridgeport Metal Goods Mfg Co Bridgeport
Plume & Atwood Manufacturing Co Thomaston
Scovill Manufacturing Company Waterbury

Vapor Degreasing Machines
Foy Electro-Chemical Co (Manual & Automatic) Ansonia

Varnishes
Staminite Corp The New Haven

Vegetable Peelers
Colt's Manufacturing Company Hartford

Velvets
American Velvet Co (owned and operated by A Wimpfheimer & Bro Inc) Stonington
Leiss Velvet Mfg Co Inc The Willimantic
Velvet Textile Corporation The (Velveteen) West Haven

Venetian Blinds
Findell Manufacturing Company Manchester
Jennings Company The S Barry New Haven
New England Shade & Blind Co Inc Durham

Venetian Blind Tape
Russell Manufacturing Company The (woven cotton and woven plastic) Middletown

Ventilating Equipment
Foy Electro-Chemical Co Ansonia

Ventilating Systems
Colonial Blower Company Plainville

Vertical Shapers
Pratt & Whitney Co Inc West Hartford

Vibrators—Pneumatic
Branford Co The (industrial) New Haven

Vinyl Extrusion & Moulding Compounds
Electronic Rubber Co Stamford

Vises
Charles Parker Co The Meriden
Fenn Manufacturing Company The (Quick-Action Vises) Newington
Vanderman Manufacturing Co The (Combination Bench Pipe) Willimantic

Wall Paper
Stamford Wall Paper Co Inc Stamford

Washers
American Felt Co (felt) Glenville
Auburn Manufacturing Company The (all materials) Middletown
Blake & Johnson The (brass, copper & non-ferrous) Waterville
Clark Brothers Bolt Co Milldale
Humphrey Fabricating Corp Unionville
Plume & Atwood Mfg Co The (brass & copper) Thomaston
J H Rosenbeck Inc Torrington
Saling Manufacturing Company (made to order) Unionville

Washers—Felt
Chas W House & Sons Inc (Mills & Cutting Plant) Unionville

Watches
E Ingraham Co The Bristol
United States Time Corporation The Waterbury

Water Heaters
Whitlock Manufacturing Co The (instantaneous & storage) Hartford

Water Heaters—Electric
Bauer & Company Inc Hartford

Water Heaters—Gas or Kerosene
Holyoke Heater Corp of Conn Inc Hartford

Waxes
Harrison Company The A S (and other protective coatings) South Norwalk

Waxes—Floor
Fuller Brush Co The Hartford

Wedges
Saling Manufacturing Company (hammer & axe) Unionville

Welding
Connecticut Welders Inc (fabrication & repairs) Wallingford
Farrel-Birmingham Company Inc Ansonia
G E Wheeler Company (Fabrication of Steel & Non-Ferrous Metals) New Haven
Industrial Welding Company (Equipment Manufacturers—Steel Fabricators) Hartford

Welding—Lead
Connecticut Welders Inc (tanks & coils) Wallingford
Storts Welding Company (tanks and fabrication) Meriden

Welding Rods
American Brass Company The Waterbury
Bridgeport Brass Company Bridgeport
Bristol Brass Co The (brass & bronze) Bristol

Wells
Church Co The Stephen B Seymour

Wheels—Industrial
George P Clark Co Windsor Locks

Wicks
Auburn Manufacturing Company The (felt, asbestos) Middletown
Holyoke Heater Corp of Conn Inc Hartford

Wiffle Ball
Wiffle Ball Inc The New Haven

Window & Door Guards
Hartford Wire Works Co The Hartford
Smith Co The John P New Haven

Window Shades
New England Shade & Blind Co Inc Durham

Wiping Cloths
Federal Textile Corporation New Haven

Wire
American Brass Company The Waterbury
American Steel & Wire Div of U S Steel New Haven
Atlantic Wire Co The (steel) Branford
Bartlett Hair Spring Wire Co The (hair spring) North Haven
Bridgeport Brass Company (brass and silicon bronze) Bridgeport
Bristol Brass Corp The (brass & bronze) Bristol
Driscoll Wire Co The (steel) Shelton
Hudson Wire Co Winsted Div (insulated & enameled magnet) Winsted
Platt Bros & Co The (zinc wire)
P O Box 1030 Waterbury
Plume & Atwood Mfg Co The (brass, bronze, nickel silver) Thomaston
Scovill Manufacturing Company (Brass, Bronze and Nickel Silver) Waterbury 91

Wire and Cable
General Electric Company (for residential, commercial and industrial applications) Bridgeport
Rockbestos Products Corporation (all asbestos, mining, shipboard and appliance applications) New Haven

Wire Arches & Trellises
Hartford Wire Works Co The Hartford
John P Smith Co The
423-33 Chapel St New Haven

Wire Baskets
Wiretex Mfg Inc (Industrial, for acid, heat, treating and degreasing) Bridgeport

Wire Cloth
Hartford Wire Works Co The Hartford
C O Jeliff Mfg Co The (all metal, all meshes) Southport
Pequot Wire Cloth Co Inc Norwalk
Rolock Inc (Alloy) Fairfield
Smith Co The John P New Haven

Wire Dipping Baskets
Hartford Wire Works Co The Hartford
John P Smith Co The
423-33 Chapel St New Haven

Wire Drawing Dies
Waterbury Wire Die Co The Waterbury

Wire Formings
Autoyre Co The Oakville
G E Prentice Mfg Co The Kensington
Master Engineering Company West Cheshire
North & Judd Manufacturing Co New Britain
Turner & Seymour Manufacturing Co The Torrington
Verplex Company The Essex

Wire Forms
Barnes Co The Wallace Div Associated Spring Corp Bristol
Bristol Spring Manufacturing Co Plainville
Colonial Spring Corporation The Hartford
Connecticut Spring Corporation The Hartford
Foursome Manufacturing Co Bristol
Gemco Manufacturing Co Inc Southington
Humason Mfg Co The Forestville
New England Spring Mfg Co Unionville
Templeman Co D R Plainville
Terryville Manufacturing Co Terryville

Wire Goods
American Buckle Co The (overall trimmings) West Haven
Patent Button Co The Waterbury
Scovill Manufacturing Company (To Order) Waterbury 91

Wire Partitions
Hartford Wire Works Co The Hartford
John P Smith Co The
423-33 Chapel St New Haven

Wire Products
Clairglow Mfg Company Portland
Humason Mfg Co The Forestville
Plume & Atwood Mfg Co The (to order) Thomaston

Wire Reels
A H Nilson Mach Co The Bridgeport

Wire Rings
American Buckle Co The (pan handles and tinners' trimmings) West Haven
Humason Mfg Co The Forestville
Templeman Co D R Plainville

Wire Rope and Strand
American Steel & Wire Div of U S Steel New Haven

Wire—Specialties
Andrew B Hendryx Co The New Haven

Wiring Devices
Harvey Hubbell Inc Bridgeport

Wood Scrapers
Fletcher-Terry Co The Forestville

Woodwork
C H Dresser & Sons Inc (Mfg all kinds of woodwork) Hartford
Hartford Builders Finish Co Hartford

Woven Felts—Wool
Chas W House & Sons Inc (Mills & Cutting Plant) Unionville

Yarns
Aldon Spinning Mills Corporation The (fine-wollen and specialty) Talcottville
Ensign-Bickford Co The (jute-carpet) Simsbury
Hartford Spinning Incorporated (Wollen, knitting and weaving yarns) Unionville

Zinc
Platt Bros & Co The (ribbon, strip and wire)
P O Box 1030 Waterbury

Zinc Castings
Newton-New Haven Co Inc 688 Third Ave West Haven (Advt.)

School Requests Prove Value of Career Booklet

(Continued from page 14)

Twenty-six fields are described in the publication, and several pages are devoted to interesting facts about the kind of plants and products in our state, and other essential data. Each chapter bears a photograph of the author, and an illustration that ties in with the contents of the chapter.

In its original planning, last year, the committee representing the sponsors discussed the project with several guidance authorities from high schools in the state. Conferences were also held with officials of the State Department of Education.

More than 25,000 booklets were used in the schools during the 1954-55 term. Most schools blended the material into Sophomore class studies, it was learned from the questionnaires. Junior groups followed close behind. A few incorporated them into Freshman or Senior curricula.

The renewal of the project, this year, has brought favorable comment in the press and other media, and by this date, the four electric utilities have completed distribution of the booklets to schools.

Pointing up their strong interest in the success of the undertaking, the sponsoring companies in their report declare, "A project that reaches out as widely in the state as this, and that gets into the hands of as many individual young people, is bound to convey needed information, and is bound to win some measure of confidence among our youth.

"Being part of Connecticut's great industrial pattern," the report continues, "we consider it our responsibility to do what we can to help safeguard and develop its future. We also recognize that when an undertaking is rewarding to industry generally, we, as one of its integral forces, benefit too."

On the committtee, representing the sponsors in the original planning for the undertaking, and in heading its implementation this year, are: George Hanel and Howard Memmott, Connecticut Light and Power Company; Edward I. Rudd, Jr., Connecticut Power Company; Justin H. Ahrens, Hartford Electric Light Company and Eben B. Haskell, United Illuminating Company.

Advertising Index

Radioisotopes - New Force for Connecticut Industries

It is apparent that the availability of radioactive isotopes at reasonable cost is opening new approaches to many production problems. Connecticut firms may be interested in the following brief report on how radioactive isotopes as research tools are proving instrumental in the development of new products and processes.

THE radioisotope is already familiar to some of you in Nutmeg industrial plants. It's been put to dozens of uses by well over a thousand other firms in American Industry; by almost an equal number for medical purposes; and by more than half as many in other operations.

In short, RI has arrived. But it's *just* arrived and mayhap you should look well into your own business and see whether it can be put to work for you.

First, let's dispel the belief that isotopes are an ultra-complicated scientific force impossible to understand. True, in some applications RI can be made confusing but, essentially, the use of isotopes means nothing more than utilizing the radioactivities which nuclear processes can impart to ordinary substances.

Next, what about isotope usage. In general, there are three categories; the first is where radiation is used as a source of energy to affect materials. Sterilization, pasteurization and fluorescence are examples. For instance, much study currently is being conducted in the use of radiation to kill bacteria in dairy products.

The second category is where radiation is affected by materials. The use of radiation in the gaging of material is perhaps the most widely accepted use of radioisotopes in product processes today.

The third is the category dealing with so-called tracer work. Here a Geiger counter or other ionization equipment is used to trace the path of radioactive material. For instance, following the flow of radioactive materials introduced into pipes or other closed systems makes possible leak detecting under conditions that would otherwise prove most troublesome. Wear studies are also made more comprehensive in many cases by the use of radioactivity. The tracing of molecular movement permits the study of many types of chemical reactions.

Now let's look at a specific example of one of these uses. Let's say you have a tool and die operation in your plant. Up to now you've had to use the costly conventional methods of testing wear of metal parts, that is, of measuring the life of the tool.

Already in use, however, is a method whereby radioactive tracers measure the instantaneous rate of tool wear. The method consists of doing some machining with a cutting tool which has been made radioactive by neutron irradiation in a nuclear reactor. Then a Geiger tube is used to measure the radioactivity of the collected particles worn from the tool during a few seconds of cutting. The accumulation, throughout the test, of the radioactivity of the chips, is proportional to the amount of radioactive tool material present on the chips, and is plotted against the wear of the tool as measured on the flank of the tool with a microscope in the conventional way.

Are New England firms using radioisotopes? The answer is *most definitely* and, in fact, New England has actually been active in *developing* uses for isotopes. Reports show that during the first five years of the Atomic Energy Commission's distribution program, New England industries and institutions received almost 12 per cent of all the domestic shipments of radioactive isotopes and over 15 per cent of all shipments from Oak Ridge, Tennessee, of concentrated stable isotopes.

Needless to say, there will be many questions in your minds as to safety and health factors (little trouble with good control), the availability of information from the AEC (good, and improving constantly), the cost of a radioisotope program (greatly varying, depending on the complexity of the program but, generally, well within reach).

For the answer to these and other questions, Connecticut industries are fortunate to have readily available a group of people who know where to get the answers on radioisotopes and their uses in industry. This is the informed, interested, and helpful industrial sales engineer at any one of these Connecticut utilities — **THE CONNECTICUT LIGHT AND POWER COMPANY—THE CONNECTICUT POWER COMPANY — THE HARTFORD ELECTRIC LIGHT COMPANY—THE HOUSATONIC PUBLIC SERVICE COMPANY — THE UNITED ILLUMINATING COMPANY.**

A few of the actual applications of isotopes in various industries include:

Gaging and thickness control in the rubber, metal, plastics and paper industries.

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Locating leaks in inaccessible piping systems.

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Determining liquid levels in pressure vessels.

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Tracing the extent of chemical reactions.

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Inspection and product control.

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Tracing the extent of blending of fibers in the paper industry.

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Checking the effectiveness of detergents in the removal of soil.

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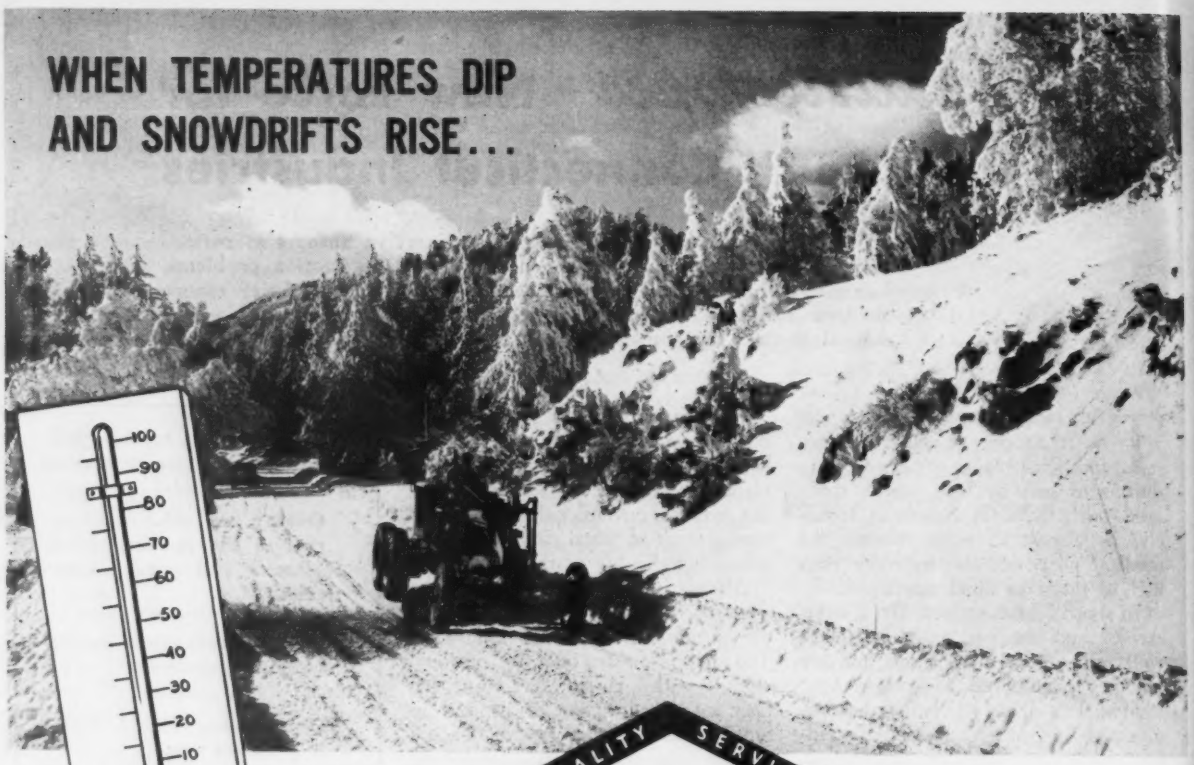
Checking the wear of cutting tools, bearings, etc.



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